

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



1.96
R312
Cap. 5

SOIL CONSERVATION LITERATURE

SELECTED CURRENT REFERENCES

V.5

July/August, 1941

No.4

	Page
Periodical Articles	158
Book and Pamphlet Notes and Abstracts	188
State Experiment Station and Extension Publications	193
U. S. Government Publications	195
Bibliographies and Lists	201
Translations	201
Defense and Democracy	202
Personnel and Training	204

Compiled by the library staff of the U.S.
Soil Conservation Service, Washington, D.C.

The publications listed herein may, in most cases, be borrowed from the Library of the Soil Conservation Service by members of the Washington and field staffs.

Loan requests should be submitted on Form SCS-405; those from field offices being routed through Regional Office Libraries. Complete citations, together with library call numbers, should always be included.

Ruby W. Moats

Ruby W. Moats
Librarian

PERIODICAL ARTICLESAlaska

- Rockie, W.A. Natanuska from Lazy Mountain. U.S. Soil Conserv. Serv. Soil Conserv. 6(11):284-286, illus. May 1941. 1.6 So3S
Some climatic, geographic, geologic, and land use aspects of the Alaska reconnaissance survey.

Conservation

- Bunce, A.C. Society and conservation. U.S. Bur. Agr. Econ. Land Policy Rev. 4(6):13-22. June 1941. 1 Ec7La
The problem discussed involves priorities of the farmer and of the nation in conservation work indicates that "research in the economics of conservation must be directed to an analysis of certain relationships and the development of techniques of evaluation".
- Experts raise their voices against plunder of natural resources. Conservation the theme at two-day convention at London - brave attempts at restoration being made but efforts lamentably inadequate - soil exhaustion, destruction of forests and loss of wild life all deplored - the public must be awakened. Farmer's Advocate and Home Mag. 76(3159):343, 362, illus. May 22, 1941. 7 F22
Summary of addresses at first annual meeting of the Canadian Conservation Association held at the University of Western Ontario, London, May 9-10, 1941, including that of Dr. H.H. Bennett.
- Gunston, J. Harnessing natural resources. Field 177(4605):412. Mar. 29, 1941. 10 F45
- Hsiang, Ching-Yuen. A philosophy of permanent conservation. Jour. Land and Pub. Util. Econ. 17(2):239-241. May 1941. 282.8 J82
The author, who has been studying land economics in the United States, elaborates on the Chinese philosophy of fengsui, mentioned as follows on p. 21 of "Town and Country Planning," by Abercrombie, "The Chinese have advanced much further than any European country in the rural problem, under the title fengsui, which literally means the weathering effect upon the landscape of the natural forces of wind and water. The density of their population has forced them to control, in the interests of landscape fitness, the human additions."
- van Loon, H.W. Give Mother Nature a chance! War news and factory smoke must not obscure home ills, says this American historian to Americans. Rotarian 58(5):10-12, illus. May 1941.
A plea for conservation of natural resources.
- Sears, P.B. Ohio landscape, 1750 to date. Land 1(2):100-102. Spring Issue, 1941. 279.8 L22
Some facts from a study of conservation in Ohio.

Whitaker, J.R. Sequence and equilibrium in destruction and conservation of natural resources. Assoc.Amer.Geog.Ann.31(2):129-144,illus.
June 1941. 500 As73

Contour Farming

Blue, William. Contour furrows result in amazing growth of grass[in Dawson co.,Mont.] Mont.Farmer 28(12):7. Feb.15,1941. 6 M764

A compass for tractors. Land 1(2):112. Spring Issue,1941. 279.8 L22
L.H.Schoenleber and his associates at Clarinda,Iowa Soil Conservation Station have invented the "grade meter" which is mounted on the tractor and used to lay out contour lines.

Contour lines laid out by one man in this system. Mo.Ruralist 82(11):13,illus. May 24,1941. 6 R8891

Explains the "one man system" of laying out contour lines.
Reprinted in Farmers' Digest 5(3):74. July 1941.

Hansmeier, W.P. New tillage methods boost wheat yields. Mont.Farmer 28(12):5,illus. Feb.15,1941. 6 M764

Effect of contour stripping and summerfallow on Montana wheat yields.

County Planning

Jones, S.W., Beers, N.E. and Jones, Idwal. The Hand County[South Dakota] program. Dakota Farmer 61(7):145,150,155,illus. Apr.5,1941. 6 DL4

Raup, P.M. An example of county land management: Lincoln County, Wisconsin. Jour.Land and Pub.Util.Econ.17(2):[233]-238,illus. May 1941. 232.8 J82

Swain, Robert. Parke County[Indiana]and land use planning. Purdue Agr. 35(8):4-5,15,illus. May 1941. 6 P97

Cover Crops

Stokes, T.E. Florida cover crops effective. Increased yield more than pays for the added cost. Fla.Grower 49(6):10. June 1941. 80 F6622

"Florida has soils which, with few exceptions, are low in organic matter and nitrogen, quite subject to leaching, and in certain sections suffer from sheet erosion and gullying when not properly terraced and cropped. Cover and green manure crops can be used to great advantage."

Dams

Fresland, Roy. If we build these dams... Kans.Farmer 78(12):3,18,illus. June 14,1941. 6 K13

Irrigation dam projects and their future benefits.

Moore, C.R. Oregon's Willamette valley project. Present construction of three dams and eventual development of other structures will benefit flood control, navigation, power, agriculture, and migratory fish life. Civ. Engin. 11(6):333-336, illus. June 1941. 290.8 C49
Irrigation benefits are cited.

Earthworms

Pearson, H.S. Earthworms valuable. Experiments clearly indicate that they are great soil improvers... New England Homestead 114(11):9. May 31, 1941. 6 N442

Evaporation

Ivitsky, A.I. Evaporation from marsh in relation to climate, drainage and evaporation. Akad. S.Kh. Nauk Dok.nos.1-2, pp.62-66. 1938. 20 Ak1. Pedology no.9, p.180. 1939. 57.8 P34

"Investigations with monoliths of undisturbed structure without vegetation and with timothy grass at constant ground-water levels of 20, 40, 60 and 80 cm. from the surface of the marsh showed that a drained but uncultivated marsh evaporated half the amount evaporated by an undrained marsh. A drained marsh sown to timothy grass, however, evaporated almost as much as an undrained one. Abs.Imp.Bur.Soil Sci. Soils and Fert.4(2):68. 1941.

Farm Forestry

Boone, D.H. [Farm woodland owner's cooperatives.] Jour.Forestry 39(5): 500-501. May 1941. 99.8 F768
Letter to the editor seeking to clarify SCS forester-farmer relations.

Brown, R.F. Forestry in the soil conservation program in Northern Mississippi. Jour.Forestry 39(7):598-600. July 1941. 99.8 F768

"Forestry as practiced on farms in soil conservation districts, where individual farmers are cooperating with district supervisors in carrying out a broad program of farm improvement, involves considerations not met with in the practice of forestry on non-farm lands. Since each farm is an economic unit, the improvement of existing woodland and future farm forest developments must be coordinated with detailed plans for the improvement of the entire farm."

Libby, J.A. The private land forestry problem in the Southwest. Jour. Forestry 39(7):620-623. July 1941. 99.8 F768

Van Camp, J.L. Pasturing the farm woodlot does not pay. Ind.Farmers' Guide 97(13):[12], illus. July 12, 1941. 6 In2

"Since woods pasturing does not provide profitable forage, and since it does extensive damage to the timber, there is no profit in having

cattle in the woods except in a small shaded corner, fenced off specifically for that purpose."

Farm Ponds

80 farm ponds added boon to conservation. Ill.Agr.Col.Ext.Serv.Ill.
Ext.News-Messenger 5(5):7. May 1941. 275.29 II62II

"Cooperators in nine southern Illinois SCS-CCC camp areas now have the benefit of 80 farm ponds they established in 1940 to help prevent recurrence of the acute water shortage suffered during past dry summer months. In addition the ponds are valuable for erosion control and wildlife protection. The 80 ponds have a capacity of approximately 100 million gallons of water.

"Farmers built 30 of the earth fills for these ponds with their own equipment; they hired contractors to build 25, and the other 25 were constructed by CCC camps. All of the ponds have been fenced for protection from livestock, and stock tanks and valves have been installed for 63 of them. Most of the 80 have been improved for wildlife by planting trees, shrubs and grass which help make them ideal habitats for fish, game birds and animals and waterfowl.

"Also in the nine camp areas farmers built 53 miles of terraces with their own equipment and 8 miles with CCC equipment. They contributed all of the material for 144 permanent structures besides the earth fills for ponds."

Entire article quoted.

Rice, W.L. If it can be done at a fairly low cost, start now to have a pond of your own. South.Agr. 71(6):4, illus. June 1941. 6 So83

Construction, maintenance, use and value of farm fish ponds. A diagram of a cross-section of an earth dam is included.

Tindall, Cordell. Ponds erase water worries. Mo. Ruralist 82(11):3, illus. May 24, 1941. 6 R8891

Fertilizer Conference

Semple, A.T. Southern New England fertilizer conference. U.S. Soil Conserv. Serv. Soil Conserv. 6(11):278-283, illus. May 1941. 1.6 So3S
A summary of the conference held at Amherst, Mass. on March 10 and 11. Contents. I. Contributions to grassland farming; II. Some facts about organic matter.

Floods and Flood Control

Babos, Z. and Mayer, L. Historic development of flood-control and surface drainage in Hungary. Hungary Ackerbau. Min., Kiserlet. Közlem. Sekt. f. Wasserbau u. Wasser Wirtsch. Vizügyi Közlem. Hydraulic Proc. 1939, pp. 12-15. 290.9 H89

English summary of a Hungarian article.

Foster, E. E. Evaluation of flood losses and benefits. Amer. Soc. Civ. Engin. Proc. 67(5):805-828, illus. May 1941. 290.9 Am3P

"The analysis of the damages, including the annual flood loss, constitutes the outstanding problem of the economics of flood control in which benefits must be weighed against costs. It is the purpose of this paper to present some methods that have been used by the writer in the U.S. Engineer Department. The primary condition imposed is that the method must be based on sound principles of mathematics, hydrology, and economics. In order to demonstrate that this condition was met, the paper contains a brief description of the various types of damage, some fundamental concepts of economics, a discussion of frequency and damage curves, and an example of the computation of the annual loss.

Moreland, J. W. Lake Traverse - Bois de Sioux project. Flood control and conservation are objectives of current work on Minnesota-Dakota border. Civ. Engin. 11(7):405-408, illus. July 1941. 290.8 C49

"Flowing north into Hudson Bay, the Red River and its upper tributaries form the boundary between Minnesota on the east and the two Dakotas on the west. In this locality the current Lake Traverse-Bois de Sioux Project, 50 miles long, serves these three states, primarily in flood protection, and secondarily in the interest of recreation and conservation. Both hydraulic studies and construction features, especially for earth embankments, are covered in this interesting account by Maj. Moreland."

Smith, W. E. Maximum probable floods on Pennsylvania streams. Amer. Soc. Civ. Engin. Proc. 67(5):873-878, illus. May 1941. 290.9 Am3P

Discussion of paper by Charles F. Ruff, published in September, 1940, Proceedings.

Wisler, C. O. and Brater, E. F. A direct method of flood routing. Amer. Soc. Civ. Engin. Proc. 67(6):1053-1063, illus. June 1941. 290.9 Am3P

"A method of flood routing is described herein, the successful use of which depends only upon the availability of dependable stream-flow records during a typical flood at various points on the main stream or on the tributaries whose flow is to be routed downstream. No cross sections of stream channel or velocities of flow are required. Nor are discharge records on all of the tributaries needed. A hydrograph of inflow from the unmeasured area is directly computed. This flow and that at each of the upstream stations is then routed downstream.

"These routed flows show the extent to which each of the upper tributaries contribute to the flood peak at each downstream point. A check on the accuracy of the results is provided by adding the routed flows and comparing the resulting hydrograph with the actual records.

"The entire procedure is based upon the storage equation and upon

the principle that, for all high stages, there is a straight-line relationship between the volume of storage contained in any reach of river channel and the sum of the inflow rate at the upper end and the outflow rate at the lower end of that reach. Except perhaps for unusual channel conditions, this relationship holds true."

Forests and Forestry

Chavannes, Elizabeth. Written records of forest succession. Sci. Monthly 53(1):76-80, illus. July 1941. 470 Sci23

Analyses of written records left by man indicate a part of the story of the encroachment of forest upon the prairies of southern Wisconsin.

Pratt, M.B. Desirable objectives in a state forest program for California. Jour. Forestry 39(7):609-614. July 1941. 99.8 F768

"Most foresters have a pretty good idea of the forestry problems in the state in which they reside. Information concerning the forestry problems in other states, though quite readily available, is too little road outside of the state to which it applies. Despite the fact that California seems to hold first place in many things, it does not seem to hold first place in state forestry. The author of this paper has been state forester of California for many years and no one, perhaps, knows better than he knows, the difficulties and possibilities of developing a state forestry program. Following Mr. Pratt's article will be found Mr. C.R. Tillotson's comments of Mr. Pratt's paper. Both papers will be found to be of interest and they show that California is confronted with many of the same problems that have long confronted the eastern states."

Grasses and Grassland

Alldis, V.R. Timber versus grass cover as a factor in soil control. Past. Rev. 51(5):345-346. May 16, 1941. 23 Au75

"It would appear that a judicious combination of timber and grass cover in all land practice should be aimed at. The nature of such combination will depend on the environmental factors, of which the soil type and the climatic and topographical features of the terrain are the chief."

Edwards, D.C. The progress of grassland research in East Africa. East African Agr. Jour. 6(3):141-143. Jan. 1941. 24 Ea74

"References," p. 143.

"In Kenya, attention has been directed over the past ten years to three main lines of work. These are: survey of the vegetation in order to make a regional classification of the grasslands [2] study of the reaction to management of the natural grassland types and the provision of pasture species for temporary leys as an essential factor in the development of mixed farming in the areas of better rainfall [3]."

Stapledon, R.G. The grassland improvement station at Dodwell-Drayton, Stratford-Upon-Avon. Roy. Agr. Soc. England. Jour. 101(2):17-27, illus. 1941. 10 R81

Wagner, Robert. Threshed seed unnecessary in seeding native grasses. Development of mature-hay method of seeding a big help in revegetating wind-eroded Great Plains area. Kans.Agr.Student 20(2):36-37,illus. Dec.1940. 276.8 K13

Warner, L.A. Piper velvet bent. Fine offspring of the bent grasses - a blueblood evolved from a family of roughnecks. New England Homestead 114(13):[3],6,illus. June 28,1941. 6 N442

Ground Water

Harmon, Burt. Contamination of ground-water resources. Industrial wastes enter gravels following old river channels in Southern California coastal region. Civ.Engin.11(6):345-347,illus. June 1941. 290.8 C43

"In the arid and semi-arid regions of the West, many large communities are vitally dependent upon ground-water supplies. Flash floods and shifting river channels have complicated the interconnections between water tables in the Los Angeles region. Surveys show that refinery wastes in particular penetrate to considerable distances from sumps and stream beds. Mr. Harmon's paper was originally presented before the Twelfth Annual Institute of Government at the University of Southern California, Los Angeles."

Lugn, A.L. Ground water allocation. Part III. Nebr.Farmer 83(6):2,15. Mar.22,1941. 6 N27

McGavock, C.B., jr. Geology and water table studies in the south rim area of Chickamauga Dam. Tenn.Acad.Sci.Jour.16(2):226-238,illus. Apr.1941. 500 T25A

Gullies

Mantuano, J. Gully stabilisations in Tolna County [Hungary] Hungary Ackerbau.Min., Kiserlet.Kozlem. Sekt. f. Wasserbau u. Wasser Wirtsch. Vizugyi Kozlem. Hydraulic Proc.1939, pp.15-17. 290.9 H89

English summary of an article in Hungarian which comprises the experiences made at the works of gully stabilisation, which were carried out with State subvention in Tolna County during more than ten years.

Swartzlow, C.R. Parallel gullies on the slopes of Lassen Peak. Jour. Geol.49(4):402-407,illus. May/June 1941. 403 J82

"Flood waters released by the 1915 eruptions of Lassen Peak carried a heavy load of boulders and forest debris, which was deposited on a relatively flat portion of the mountain slope. Succeeding waters were split by the boulders and caused parallel gullies to be eroded.

"Parallel gullies are not uncommon features on many types of terrain. They are found most commonly in semiarid regions where torrential rains occur, or when open joints or bedding planes direct the water in definite channels. This type of gully is also found in agricultural areas where plow or harrow furrows are placed parallel to the slope of a hill, thus converging the runoff in parallel channels. Parallel gullying as a result of volcanic activity must be of much less common occurrence."

Highway Erosion Control

Correcting erosion on Louisiana route. Roadside development job on U.S. 80, awarded to Glassell, improves main Southern highway. Contractors and Engin. Monthly 38(4):33,43,illus. Apr. 1941. 290.8 C765

The "unusual cooperation" of the Glassell General Construction Co. of Shreveport, La., in connection with a roadside development job, won Honorable Mention for the Southern Section in Contractors and Engineers Monthly's Roadside Development awards for 1940.

Meginnis, H.G. Soil losses from southern roadbanks. U.S. Forest Serv., Serv. Bul. 25(9):10. Apr. 28, 1941. 1.9 F76S

"A series of measurements made at Holly Springs, Mississippi, during the past few years indicates that untreated road backslopes lose about 3/4-ton of soil dry weight each year from each hundred square feet of eroding surface...

"Experiments which have been under way for several years show that the backslopes, fills, and berms contribute the bulk of the soil washed from the right-of-way, and that losses from the road surface, although of considerable economic importance are of relatively small amount. The present loss of road-surfacing materials, which is quite an item in maintenance costs, could undoubtedly be reduced considerably through the revegetation of the road shoulders and stabilization of the roadside ditches."

Sodding problems on Texas highway. Superintendent on job made helpful suggestions for handling work on 3.6 mile grading job. Contractors and Engin. Monthly 38(5):22,34,illus. May 1941. 290.8 C765

"An interesting feature of a recent 3.6-mile grading and drainage contract to relocate U.S. 190 in Tyler County, Texas, was the variety of types of sodding used on the roadsides in order to control erosion."

Hydraulics and Hydrology

Allis, J.A. and Kelly, L.L. Watershed and hydrologic studies on the Central Great Plains. Agr. Engin. 22(6):215-217,illus. June 1941. 58.8 Ag83

"The Central Great Plains Experimental Watershed has obtained about two years of records to date. Only the trends of possible results have been indicated so far. Data for a number of years is required before conclusions may be derived, therefore an analysis can not yet be made. However, a hydrologic bulletin, giving the data up to this time, is being prepared and will be published by the Soil Conservation Service in the near future."

Broikos, A. Mechanique des fluids. Genie Civil 116(3016):356-359, illus. June 1, 1940. 290.8 G29

French. Translated title: The mechanics relating to fluids. Translation in Engin. Data section, Off. Chief Engin.

Sherman, L.K. The unit hydrograph and its application. Assoc. State Engin. Soc. Bul., Apr. 1941, pp. 1-19, illus.
"References," pp. 18-19.

Vanoni, V.A. Velocity distribution in open channels. Civ. Engin. 11(6): 356-357, illus. June 1941. 290.8 C49

Implements and Machinery

Aylen, D. A new ditcher. Rhodesia Agr. Jour. 38(1): 8-14, illus. Jan. 1941. 24 R34

An account of the trial, results and advantages of "a ditcher primarily designed to construct contour ridges with wide banks and wide shallow water channels without recourse to subsequent trimming".

Faulkner, E.H. Disc harrow for plow. New Repub. 104(16) Pt. 1: 534-535. Apr. 21, 1941. 280.8 N

Letter to the editor regarding the effect on crops and water conservation of "working into the soil a crop of tall rye - cutting it into the soil with an old and well known farm tool, a disc harrow, instead of sandwiching it in as is ordinarily done with a plow".

Nichols, I.F. Teaching the use of the farm level in the farm-mechanics course. Agr. Ed. Mag. 13(8): 152. Feb. 1941. 275.8 Ag8

Includes farm level teaching units for agriculture 1, Tempe Union high school, Tempe, Arizona.

Interception

Kittredge, J., Loughhead, H.J., and Mazurak, A. Interception and stemflow in a pine plantation. Jour. Forestry 39(6): 505-522, illus. June 1941. 99.8 F768

"Literature cited," p. 522.

"The amount of precipitation reaching the ground under a canopy of vegetation is quite different from the amount recorded in rain-gages in standard exposures in the open. The difference results from interception by the crowns corrected for the amount that flows down the stems. For some purposes, interception is combined with evaporation and transpiration as the total loss of water not recoverable for use. When, however, as is frequently the case a comparison of run-off or infiltration is to be made between areas with and without or of different vegetative covers, it is essential to know how much of the precipitation reaches the ground as a basis for the comparison. Furthermore, if it is desirable to know the interception, it becomes necessary to measure it with a sufficient number and adequate type of gages so that variations may be evaluated and a representative average figure obtained for an area of land as a whole. The attempt has been made in this article to analyze the variations of interception and stemflow in relation to characteristics of stand and trees, and to apply the results to specific land areas."

The results summarized cover a 7-year study in a 28-year old Canary Island plantation at Berkeley, California.

Irrigation and Drainage

Apply irrigation water wisely. Idaho Farmer 59(13):326,illus. June 19,1941. 6 G282

"This is the second in a series of articles on conservation in irrigation based on information supplied by Soil Conservation Service technicians of the United States Department of agriculture."

Also appears in Ore.Farmer 64(13):331. June 19,1941.

Hays,D.W. Exhibit "C".Economic development for irrigable lands. Engin. Jour.24(5):232-235. May 1941. 290.9 En3

Houston,G.N. Exhibit "B".International aspects of the Southern Alberta irrigation project. Engin.Jour.24(5):229-232. May 1941. 290.9 En3

Improper irrigation wastes both soil and water. Idaho Farmer 59(12):301,illus. June 5,1941. 6 G282

"This is the first in a series of articles on conservation in irrigation based on information supplied by soil conservation service technicians of the United States Department of agriculture."

Jarrett,C.D. Key spot project in Nevada. U.S.Soil Conserv.Serv.,Soil Conserv.6(11):277-278,illus. May 1941. 1.6 So3S

Service work in the Pahrangat Valley soil conservation district of Utah,involving an irrigation ditch,has prompted C.O.Bastian, chairman of the Lincoln county planning commission, to remark"the Soil Conservation Service has just completed the job in Pahrangat Valley which has doubled the value of the three farms involved.I know this because I used to farm one of the places myself,and if I were to buy it back to-day I would have to pay twice the price it sold for".

Johnston,J.C. Use of water dollars.A brief discussion on present irrigation practices. Calif.Citrog.26(9):251,illus. July 1941. 80 C125

Kreybig,L. v. Drought and water with special consideration of the utilisation of irrigating water. Hungary Ackerbau. Min., Kiserlet. Közlem. Sekt. f. Wasserbau u. Wasser Wirtsch. Vizügyi Közlem.Hydraulic Proc.1938,pp.49-51. 290.9 H89

An English summary of a Hungarian paper which treats of the practically important conclusions which can be drawn from the data set up by the Royal Geological Institute,Budapest,concerning the pedologic surveys and searching examinations of soils,as well as the profound studies extending over several years,of the features of water economy of soils and plants.

Massey,G.F. Increasing use of pump irrigation. Impl.and Tractor 56(10):14-15,18,illus. May 10,1941. 58.8 W41

Pumping plants for irrigation system. Engin.News-Rec.127(1):57-59,illus. July 3,1941. 290.8 En34

"Irrigation of the fertile Rio Grande Valley in Texas depends entirely

upon pumping from the river. Willacy County Water Control and Improvement District No.1, one of the largest irrigation districts in the valley, has recently put in service a series of new pumping plants. At the river are four 48-in. diesel-driven pumps. The main re-life plant contains three 42-in. diesel pumps. Smaller relife plants and portable pumping units complete the water-handling system."

Rohwer, Carl. Cost of pumping reduced. Calif. Cult. 88(11):[315], 319.
May 31, 1941. 6 C12

Sterling, E.W. The Powell irrigation survey, 1888-1893. Miss Val. Hist.
Rev. 27(3):421-434. Dec. 1940. 134.8 M69

Streamlining irrigation efficiency. New methods bring end to "horseback irrigation" era. Through the Leaves 29(3):12-15, illus. May 1940. 66.8 T41

Suarez, A.L. La obra de irrigation en Mexico. Rev. de Agr. [Cuba] 23(16): 131-133. Apr. 1940/Apr. 1941. 8 Ag88Re
Spanish. Translated title: Irrigation work in Mexico.

Sutton, J.G. Farm drainage operations for the farm planner. U.S. Soil Conserv. Serv., Soil Conserv. 6(12):323-327, illus. June 1941. 1.6 So3S
"The article presented here does not include discussion of drainage of irrigated lands."

Van Der Meulen, I.W.A. Irrigation in the Netherlands Indies. Far East. Rev. 37(2):52-57, illus. Feb. 1941.

Wahlberg, H.E. Summer irrigation following a heavy rain season. Pacific Rural Press and Calif. Farmer 142(1):13. July 12, 1941. 6 P112

Land, Mined

Strip mine areas [in Indiana] to be reforested. Ind. Farmers' Guide 97(10): 13, illus. May 17-31, 1941. 6 In2

Land Management and Utilization

Anderson, A.W. and Hoglund, C.R. Has erosion control changed land use? Minn. Univ. Agr. Ext. Div. Farm Business Notes no. 220, p. 3, illus. Apr. 1941. 275.29 M663

"A study of detailed records kept by a small group of Winona County [Minn.] farmers over a period of years gives some information regarding the use of land before the [erosion control] program, and during the five years that it has been in existence..."

"[It] indicates that, other than the decrease in total crop acres, not much change has taken place in the proportion of land used by the different kinds of crops on this group of farms. However, the number of fields on these farms has almost doubled, and the shape, size, and arrangement of these fields and the manner of working them have changed considerably."

A table gives "average use of land on seven farms in Winona County, 1935-1940."

Angell, G.N. Use land for what it's good for and in the way it's good to use. Oreg. Farmer 64(11):275, 291, illus. May 22, 1941. 6 Or32
Land use planning in Oregon.

Elwell, H.M. Land reclamation and pasture investigations on abandoned and scrubby oak areas [in Oklahoma] U.S. Soil Conserv. Serv. Soil Conserv. 6(12):328-331, illus. June 1941. 1.6 So3S
"Literature cited," p. 331.

Keeper, W.E. Pennsylvania land - its use and classification. Penn State Farmer 6(9):188-189, 205, illus. June 1940. 276.8 P38

Land-use planning tries to coordinate [Utah] state agricultural program. Committees study land and water development, livestock improvement. Weed control and related farm problems. Utah Agr. Expt. Sta. Farm & home Sci. 2(2):1, 10. June 1941. 100 Ut1F

Stamp, L.C. Agricultural land and national planning. Nature [London] 147(3734):647-648. May 24, 1941. 472 N21
"Summary of a paper read before the Town and Country Planning Conference held at Oxford, March 28-31, 1941."

Legumes

Johnson, J.A. Planting lespedeza sericea with black locust. U.S. Soil Conserv. Serv. Soil Conserv. 6(12):331-332, 334, illus. June 1941. 1.6 So3S
"The growing of two types of plants on a single area with the desired results and without injury to either is unusual, but such a planting is especially worth while if it helps the farmer to solve a land-use problem in a practical way. This article tells briefly of successful demonstrations in the growing of black locust (Robinia pseudoacacia) and Lespedeza sericea on Mississippi farms in two erosion-control demonstration projects and one CCC camp area."

Rankin, F.A. The South now looks on its lespedezas, clovers and other legumes as so much green gold. South. Agr. 71(5):10-11, illus. May 1941. 6 So83

Maps and Mapping

Britton, A.T. Mapping from aerial surveys. Inst. Engin. Austral. Jour. 13(5):121-126. May 1941. 290.9 In75
"Much has recently been written on the subject of aerial survey. Of this a good deal has been written or inspired by flying companies and those interested in the sale of equipment. Emphasis has mainly been laid

on the ease and speed of the field work as compared with ground methods and the work involved in plotting has rarely been discussed. There is, therefore, a widespread impression that the flying and photography are the only considerable items in aerial survey and that the plotting is of negligible importance both in cost and in time. While it is not contended that the flying is unimportant, in fact good flying is the first essential and is by no means easy to achieve, the purpose of this paper is to point out what plotting really involves and to show that it is of greater importance than the flying."

Brown, C.B. Mapping Lake Mead. Geog. Rev. 31(3):385-405, illus.
July 1941. 500 Am35G

Medina, Guillermo. Photogrammetry and its application to hydrographic surveys. Photogrammetric Engin. 7(2):52-59. 325.28 P56
Includes discussions of Mr. Medina's paper by J.U. Beauchemin, R.J. Fraser, and J.L. Rannie; also Mr. Medina's reply to discussions.

Moisture

Allyn, R.B. and Work, R.A. The availameter and its use in soil moisture control. II. Calibration methods. Soil Sci. 51(5):391-406, illus.
May 1941. 56.8 So3
"References," p. 406.

"In the preceding part of this paper the availameter was described and its use in routine irrigation practice discussed. In the present paper the calibration and use of the instrument in quantitative studies of irrigation problems, whether in experimental work or on commercial orchards, are shown together with supporting data. The irrigation experiments at the Medford Experiment Station and the soil moisture control project on commercial orchards provided an excellent opportunity to investigate the accuracy of the availameter readings as indicators of soil moisture content."

Ballenegger, R. Process of changes of moisture in calcareous clayey soils. Hungary Ackerbau. Min., Kiserlet. Közlem. Sect. f. Wasserbau u. Wasser Wirtsch. Vizügyi Közlem. Hydraulic Proc. 1938, pp. [44]-45. 290.9 H89
English summary of an article in the Hungarian language.

Edlefsen, N.E. and Anderson, A.B.C. The four-electrode resistance method for measuring soil-moisture content under field conditions. Soil Sci. 51(5):367-376, illus. May 1941. 56.8 So3
"References," pp. 375-376.

Orchard Erosion

Clayton, E.W. Orchard husbandry. Copper's Farmer 52(6):18, illus.
June 1941. 6 M693
Terracing is a big item in the success of a young peach orchard in Limestone county, Texas.

Orchards save soil. Ind.Farmers' Guide 97(10):13. May 17-31,1941. 6 In2
Advocates the planting of peach orchards on hillside fields, and gives
general recommendations for conserving soil in the planting of such
orchards.

Talbert, T.J. and Murneck, A.E. Soil management and fertilization in
orchards. Farmers Digest 5(2):63-67. June 1941. 6 F2286
Includes suggestions for preventing soil erosion.

Peaches

Bregger, J.T. Research with peaches in the South. East.Fruit Grower
4(2):10,15,18-19. Apr.1941. 80 Ea73
"Literature cited," p.19.

Percolation

Zolotarev, S.N. and Dashovskii, L.I. An experiment in decreasing filtra-
tion of water into the ground by means of sodium chloride. Pedology
no.6, pp.75-82. 1939. 57.8 P34

"Treating storage ponds and irrigation canals with NaCl causes the
channels to become clogged and prevents losses of water by percolation.
In chernozem it is necessary to add enough NaCl to equal the exchange
capacity to a depth of 20 cm." J.S.Joffe. Abs.Chem.Abs.35(10):3378.
May 20, 1941.

Rainfall

Bernard, M. and Ruff, C.F. Reliability of station-year rainfall frequency
determinations. Amer.Soc.Civ.Engin.Proc.67(3):474-482, illus. Mar.
1941. 290.9 Am3P

Discussion of paper by Katharine Clarke-Hafstad published in November,
1940, Proceedings.

Smith, W.E. and Lowry, R.L., jr. Reliability of station-year rainfall-
frequency determinations. Amer.Soc.Civ.Engin.Proc.67(5):887-890, illus.
May 1941. 290.9 Am3P

Discussion of paper by Katharine Clarke-Hafstad, published in November,
1940, Proceedings.

Thom, H.C.S. Reliability of station-year rainfall-frequency determinations.
Amer.Soc.Civ.Engin.Proc.67(6):1113-1118, illus. June 1941. 290.9 Am3P

Discussion of paper by Katharine Clarke-Hafstad, published in November,
1940 Proceedings.

Range and Pasture Management

Brown, B.A. Twenty years with pastures. Rural New Yorker 100(5505):
366, illus. June 14, 1941. 6 R88

The improvement and maintenance of production on the millions of acres
of permanent pastures in northeastern United States is an important

problem which the Storrs and other eastern experiment stations have been investigating.

To be continued.

Gough, R.H. Importance of a feed reserve as an aid in ranch conservation. Southwest Sheep and Goat Raiser 11(6):19,22-24. Mar. 1941. 45.8 So85

Kaleski, L.G. New pastures for old. What can be done on north-west slopes and nearer plains [of New South Wales]. N.S. Wales Agr. Gaz. 51(Pt.6):302-306, illus. June 1, 1940. 23 N472

"On the north-west slopes and nearer plains of New South Wales there has been considerable activity in recent years in pasture work. The district is in the transitional stage from a purely grazing area to one of intense activity in agriculture, including large areas of sown pasture. The area with which this article deals includes the whole of the north-west slopes bounded on the eastern side by a line joining Bonshaw, on the Queensland border, to Inverell, Bingara, Barraba, Manilla and Tamworth; and on the western side by a line running through Mungindi, Valgett and Coonamble. There are approximately 30,000 square miles in this area."

To be continued.

Keller, Wesley. Range improvement through better varieties of grass is aim of breeding program. Utah Agr. Expt. Sta. Farm & Home Sci. 2(2):7, 11, illus. June 1941. 100 UtlF

Mangum, Milton. A new West is dawning. West. Farm Life 43(13):4, 15, illus. July 1, 1941. 6 R153

Range building under the range conservation program.

Rutherford, D.M. Healthy increase in use of permanent pastures. Pacific Rural Press and Calif. Farmer 141(1):16. Jan. 11, 1941. 6 P112

"The acreage of irrigated pastures in southern California may not be spreading like wild fire, but it is making a very healthy increase. The word 'healthy' is used advisedly. Dairymen are finding that the use of irrigated pastures saves feed costs, gives greater yield of better milk, herd health is improved. The desirability of a plentiful supply of vitamin A and the other benefits of green feed are being borne out in the cost ledgers of many dairymen."

Thompson, George. Results of the sheep and wool improvement program under way on Navajo Indian reservation. N. Mex. Stockman 6(5):18-19, illus. May 1941. 49 N462

Reservoirs

Bowden, N.W. Multiple-purpose reservoir operation. Part II. In combination systems with several units. Civ. Engin. 11(6):[337]-340, illus. June 1941. 290.8 C49

"Utilizing water storage for the joint interests of flood control and power, formerly considered inconsistent and antagonistic, has proved

feasible for single projects, as shown by Mr. Bowden's article in the May issue. Taking the TVA as an example, he explains in this paper how the many objectives of multi-purpose projects can also be attained in a large river system with a number of reservoirs. Operations in the interest of navigation and power are parallel. More difficult is the flood control, for which two general schemes are described. The results, aided by special weather forecasts, have been most gratifying - low flows have been more than doubled, to the benefit of navigation and power, and flood crests have been reduced by as much as 5 ft. or more."

van Dyk, G.J. Cement reservoirs for windmills. Farming in So. Africa 16(181):146. Apr. 1941. 24 So842

Lists 11 benefits experienced by South African farmers in the Lichtenburg district as a result of construction of small dams under the Soil Erosion Scheme.

Rivers and Streams

Robinson, A.G. The training of alluvial rivers. Malayan Forester 10(2):42-48, illus. Apr. 1941. 99.8 M292

Run-off

Harrold, L.L. Surface runoff determination from rainfall without using coefficients. Amer. Soc. Civ. Engin. Proc. 67(6):1180-1182, illus. June 1941. 290.9 Am3P

Discussion of paper by W.W. Horner and S.W. Jens, published in April, 1941, Proceedings.

Kennedy, A.L. Equipment for runoff measurements. Agr. Engin. 22(6):218, 220, illus. June 1941. 58.8 Ag83

"The Tennessee Agricultural Experiment Station, in cooperation with the agricultural relations department of the Tennessee Valley Authority, has under way a project to study the effect of fertilization and associated farm practices on the erosivity and infiltration capacity of important Tennessee soils. The runoff measurements necessary for the required determinations are made on 1/20 to 1/5-acre plots, under various conditions as to soil type, slope, cultivation, productivity, fertilizer treatment, and cropping systems. Most of the runoff measurements are made by means of portable rain-simulator equipment and measuring devices that can be set up on privately-owned fields without damage to crops."

Linsley, R.K., jr. and Ackermann, W.C. Method of predicting the runoff from rainfall. Amer. Soc. Civ. Engin. Proc. 67(6):1023-1033, illus. June 1941. 290.9 Am3P

"The problem of estimating runoff accurately and quickly from reported rainfall is the most difficult phase of river forecasting. The writers have analyzed hydrological and meteorological records of the Valley River Basin in North Carolina to develop a rational method of predicting runoff based on average rainfall and evaporation from a standard land pan."

Sand Dunes

Perez, H.M. Dunas y forestacion. Contribucion al estudio de la solucion del problema; Consolidacion de las dunas de la costa atlantica sur de la Provincia de Buenos Aires. Maderil 13(153):12-16, illus. Mar. 1941. 99.82 M26

Spanish. Translated title: Dunes and forestation.

Stabilizing a dune. Planting of pines to protect a harbor. Sci.Amer. 164(6):359-360. June 1941. 470 Sci25

"With sand threatening to choke up their harbor, the people of Grand Haven, Michigan, are doing something about it. For years a huge dune has been showering tons of sand into the Grand River, necessitating frequent dredging by engineers. This year the citizens of Grand Haven are determined to 'tie down' Dewey Hill once and for all. The city acquired 83,000 pine trees, and one day the whole community marched on the hill, armed with shovels and buckets, to plant them. The volunteers, with the help of CCC workers, covered about 40 acres with the trees. It is expected that the pines, together with the beach grass planted by a CCC crew, will hold the sand in place and help protect the harbor. The planting is a part of the work of the West Ottawa soil conservation district, started in the Grand Haven area two years ago."

Entire article quoted.

Sedimentation and Silt

Brown, C.B. Factors in control of reservoir silting. Amer. Water Works Assoc. Jour. 33(6):1022-1040, illus. June 1941. 292.9 Am32J
"References," p.1040.

Caldwell, D.H. and Babbitt, H.E. The flow of muds, sludges, and suspensions in circular pipe. Amer. Inst. Chem. Engin. Trans. 37(2):237-266, illus. Apr. 25, 1941.
"Literature cited," p.266.

Gopalakrishnan, C. Regime flow in incoherent alluvium. Cur. Sci. [India] 10(3):139-142. Mar. 1941. 475 Sci23
A review of "Regime flow in incoherent alluvium," by Gerald Lacey (Central Board of Irrigation Publication No.20.) 1940, p.65.

Johnson, J.W. Formulas for the transportation of bed load. Amer. Soc. Civ. Engin. Proc. 67(6):1173-1175. June 1941. 290.9 Am3P
Discussion of paper by H.A. Einstein, published in March, 1941, Proceedings.

Johnson, J.W. The transportation of sediment by flowing water and its importance in soil conservation. U.S. Soil Conserv. Serv. Soil Conserv. 6(11):290-293, illus. May 1941. 1.6 So3S

Kurpad, G.S. Silt. Mysore Agr. and Expt. Union Jour. 18(4):[182]-184. Apr./June 1940. 22 M993

"Summing up, the silting up of tanks can be largely controlled and

to a certain extent prevented by(1)proper control of gomal and other waste lands and growing suitable fodder grasses on them,(2)proper levelling and bunding of dry lands in the catchment area of tanks and (3)growing a thick belt of trees on the fringes of tanks."

Lane,E.W.and Eden,E.W. Sand waves in the lower Mississippi River. West.Soc.Engin.Jour.45(6):281-291,illus. Dec.1940. 290.9 W522

"Hydraulic engineers in the past have thought of large streams as rivers of water but they are now beginning to consider them also as rivers of sediment,since in most cases there is a continuous flow of sediment as well as water down the stream.Some rivers may be intermittent sediment streams and are thus comparable to intermittent water streams,but few if any rivers are continually 'dry' from the standpoint of sediment.The hydraulic engineer is adopting this viewpoint because of the difficulties which he is meeting in some engineering projects which have been designed with consideration only of the handling of the water.In some problems,for example,the control of the floods of the Yellow River in China,the handling of the river of sediment may be even more difficult than the handling of the river of water."

Sedimentation and hydraulic structures studied in the South. Civ.Engin. 11(6):375-376. June 1941. 290.8 C49

A brief interpretation of the developments witnessed at the Enoree river sediment station of SCS at Greenville,S.C.,by Haywood G.Dewey, the A.S.C.E's Freeman scholar for 1940-41.

Seeds and Seedlings

Hope,Claude,Stoutemyer,V.T.and Close,A.W. Sphagnum for seed germination prevents damping-off losses on unsterilized soil. South.Florist & Nurseryman 51(9):[3]-4,34,illus. June 6,1941. 80 So86

Snow Surveys

Lewis,M.R. Planning for multiple-purpose water projects. Civ.Engin. 11(7):433. July 1941. 290.8 C49

Letter to editor about snow survey and irrigation water forecast program of the Soil Conservation Service,Division of irrigation.

Nevada snow and runoff surveys. Engin.News-Rec.127(1):69. July 3, 1941. 290.8 En34

"Some of the forecasts of streamflow in Nevada for 1940,based on snow surveys,were considerably below the actual results,according to the report of the Nevada Cooperative Snow Surveys for April,1941.This discrepancy is attributed to the fact that in making the forecasts, too little attention was paid to winter rains in January and March, 1940.Much of this rainfall was above El. 7,000 and some as high as El. 8,000.This precipitation was so great as to bring the winter total to 158 to 179 percent above normal at six of the observation stations, representing a rise of 12 to 31 in. in water level.But this increase was not evident from the snow surveys because of so much rain,much of

which must have been stored in the ground until spring.

"On the other hand, the discharges of the Carson and Walker rivers checked very closely with the forecasts, the predicted flow being 71 to 80 percent of normal, while the actual results were 76 to 93 percent of normal. As to the outlook for 1941, the report states that the October-November precipitation of 1940 was slightly above normal and the December precipitation was unusually heavy, so that the snow surveys of Feb. 1 showed higher water content than for the same date of 1940. However, winter rains and high temperature in February, together with deficient precipitation in March, have kept most of the courses under the water-content record of April 1, 1940."

Entire article quoted.

Snow surveys. Mont. Farmer 28(15):2. Apr. 1, 1941. 6 M764

"March 1 snow surveys show 26 percent less moisture than for the same date in 1940 in the Missouri and Yellowstone basins. These survey figures were compiled by O. W. Monson, irrigation and drainage engineer for the Montana agricultural experiment station, who is in charge of the federal-state co-operative snow surveys."

Soil conservation

Black, C. D. Cooperators appraise conservation program. U. S. Soil Conserv. Serv. Soil Conserv. 6(12):316-318, illus. June 1941. 1.6 So3E

A report on a survey of Salt Creek project, Ohio's oldest soil conservation demonstration.

Brink, Wellington. A green dress for Dixie. Junior Red Cross Jour. 17(9, pt. 1):264-266, illus. May 1941.

Discussion of year-round cover of protective and soil-building vegetation in the South.

Bunce, A. C. and Wilcox, W. W. A neglected point in the economics of the soil: a reply. Jour. Farm Econ. 23(2):475-477. May 1941. 280.8 J822

Felton, R. A. He saves soil to save souls. Prog. Farmer (Ga.-Ala.-Fla. Ed.) 56(7):6, 14, illus. July 1941. 6 P945G

The story of Paul Doran, minister to farmers in a large Tennessee parish.

Gordon, Alexander. Conserving farm soils [in the Philippines] Sugar News 22(5):145-146. May 1941. 65.8 Su36

"The importance of sound farm management and judicious cropping is readily understood when one looks at soil fertility not as a temporary asset but as an heritage; not of the farmer alone but of everyone. The improvement of the soil should not be the concern of a few, but it should be the concern of the community, the nation. Soil conservation is an important factor in the lives of the people."

Havighurst, Walter. The land and the people. U.S. Bur. Agr. Econ. Land Policy Rev. 4(6):3-12. June 1941. 1 Ec7La

Indicates the three stages in the relationship of people to the earth they live on. The third stage involves cooperation and the author concludes with "a cogent, challenging restatement of the conservation cause: 'The greatness of America has been the greatness of our continent - its sweep, its varied resources, its abundant vitality. We have what other nations go to war to obtain. And if we are determined to defend it from attack, we should be equally determined to defend it from our own abuse.'"

Hodgkin, Carlyle. Cover farming. Something new that promises to save runoff water and soil by keeping crop trash on the surface instead of plowing it under. Successful Farming 39(7):16,32, illus. July 1941. 6 Sul2

Hogenson, J.C. I take this land. Utah Farmer 60(18):4. May 10, 1941. 6 D45

A farmer's oath of allegiance to his land.

Ireland, H.A. A geologist practices soil conservation. U.S. Soil Conserv. Serv. Soil Conserv. 6(12):305-306, 312. June 1941. 1.6 So3S
An intimate story of the personal experiences of the writer's friend in making a seemingly worthless Oklahoma farm pay with the aid of intelligently planned soil conservation practices.

Lange, Gunnar. A neglected point in the economics of soil conservation. Jour. Farm Econ. 23(2):467-474. May 1941. 280.8 J822

The writer reviews the "two schools of thought" regarding the economics of soil conservation, one of which employs "the classical theory of land economics, assuming perfect foresight" and the other discussing the problem "in terms of time preferences."

He then proposes another approach, that of focusing upon "differences in planning".

Legal techniques for promoting soil conservation. Yale Law Jour. 50(6): 1056-1070. Apr. 1941. 274.008 YL

McDonald, Angus. White trash and fanatics. Land 1(2):131-134. Spring Issue, 1941. 279.8 L22

Letter in response to criticism of people of Oklahoma in which Mr. McDonald stresses soil conservation.

McNall, P.E. Farm buildings as evidence of productivity of crop land. Jour. Land and Pub. Util. Econ. 17(2):165-170, illus. May 1941. 282.8 J82

Using as a sample for the study reported, 165 farms in Arland township, Barron County, Wisconsin, the conclusion was reached that "the somewhat more definite relationship between (1) the amount apparently spent for repairs and (2) productivity and income suggests that over a longer period the character of the buildings may be a usable index of soil and of income. This relation is not yet sufficiently definite to justify

its use in policy making or program building for single farms, groups of farms, or the whole area. Another hundred years of farming experience in this area may alter this judgment. The relative newness of the area may explain why the technique of land classification based on farm-building classification is not now applicable."

Mukherjee, B. The economics of soil erosion and its influence on national life. Indian Jour. Econ. 21(pt.2):148-157. Oct. 1940. 280.8 In22

Mulkey, W.T. Soil and moisture conservation. U.S. Bur. Reclam. Reclam. Era 31(4):103, 127, illus. Apr. 1941. 156.84 R24

Outlines program for soil and moisture conservation investigations and surveys for 12 reclamation projects as a part of the work on public lands undertaken by the Department of the Interior.

Patton, C.P. Farm hedges and their practical management with special reference to ditchbank vegetation. N.C. Wildlife Conserv. 5(5):8-10, illus. May 1941. 279.8 N812

Semple, A.T. A safer use of land. U.S. Soil Conserv. Serv. Soil Conserv. 6(12):334. June 1941. 1.6 So3S

Indicates the economic advantages of making silage from perennial grasses and legumes which both "fits admirably into the trend toward grass-land farming and meets the urgent need for cheaper methods of producing meat, milk, and other livestock products."

Smith, D.D. Interpretation of soil conservation data for field use. Agr. Engin. 22(5):173-175, illus. May 1941. 58.8 Ag83
"References," p. 175.

Sullivan, C.B. Protecting the back slope of interception ditches. U.S. Soil Conserv. Serv. Soil Conserv. 6(12):333-334, illus. June 1941. 1.6 So3S
Describes an example of sod waterway construction used effectively and extensively in Lancaster and York counties, Pa. since the summer of 1938.

What value conservation? U.S. Soil Conserv. Serv. North. Great Plains Reg. Plains Trails 2(12):5. June 1941. 1.9607 P69

Facts brought out at a recent meeting of the Mortgage Bankers' Association at Pawnee City, Nebraska indicate that "the soil and moisture conservation program has a definite, practical value in the opinion of men whose business is loaning money on farm lands."

Findings of appraisers are given in a table.

Winters, N.E. Soil saving work covers 2,400 acres [in Hawaii] Hawaii Farm and Home 4(5):3, illus. May 15, 1941. 25 H3191

Soil Conservation Districts

Conservation district establishment may end. Ind. Farmers' Guide 97(12):8. June 28, 1941. 6 In2

"Some of our Indiana people, fearful of the increasing trend toward government control of everything agricultural, must have had enough influence in the 1941 session of the legislature to get through a new law making it much more difficult to establish soil conservation districts in the state.

"The old law, passed in 1937, provided that at least a majority of the landowners living within the proposed district must vote favorably in the referendum before the program could be carried further toward its

its ultimate end. Under the new act at least 60 per cent of those eligible to vote in the referendum must take part and at least 60 per cent of those voting, instead of a mere majority, must vote favorably if the election is carried. Furthermore, in case of unfavorable action, two years now must elapse before a new referendum can be held as compared with only six months previously. The program to be followed, in event a new district is established, must be approved by at least 90 per cent of those eligible to vote.

"It should be a fairly safe guess that no new soil conservation districts will be established after completion of those already underway."

Entire article quoted.

Tri-River soil conservation district, Pocahontas, Ark., December 31, 1940. Semiannual report, submitted by the Board of Supervisors. U.S. Soil Conserv. Serv. Soil Conserv. 6(12):318-322, illus. June 1941. 1.6 So3S

Soil Conserving Plants

Atkins, O.A. and Young, W.C. The partridge, Chamaecrista fasciculata, a promising plant for soil conservation. Amer. Soc. Agron. Jour. 33(5): 471-472, illus. May 1941. 4 Am34P

Bailey, R.Y. \$2,000,000 in Kudzu crowns. Prog. Farmer (Ga.-Ala.-Fla. Ed.) 56(7):7. July 1941. 6 P945G

Bartholomew, R.P. Kudzu, a soil builder. U.S. Soil Conserv. Serv. Soil Conserv. 6(12):335, illus. June 1941. 1.6 So3S

"Although experiments with kudzu in Arkansas have not always been as successful as desirable, the results of an experiment at the Fruit and Truck Experiment Station near Hope, on a depleted and eroded Ruston fine sandy loam, prove the soil-building qualities of kudzu."

Taylor, F.J. Uncle Sam's rubber farmer. Country Gent. 111(6):16, 57-58, illus. June 1941. 6 C833

"Through Dr. William B. McCallum's work, 40,000 farmers, each with 100 acres of guayule, could make us independent of foreign rubber sources."

It is an erosion control plant of economic value and can be used on worn-out as well as rich soil. It is now grown on marginal land in the Southwest.

Soil Erosion and Control

Combs, L.R. Defense - from ridge to river. U.S. Soil Conserv. Serv. Soil Conserv. 6(11):286-290, illus. May 1941. 1.6 So3S

How McGregor, Iowa townspeople, cooperating with the Soil Conservation Service and the Iowa State College "built a permanent defense against soil erosion and floods".

Hamblin, I.E. Less soil erosion on plots seeded to close growing cover crops. Miss. Agr. Expt. Sta. Miss. Farm. Res. 4(5):7, illus. May 1941. 100 M69Fi

Refers to recent data obtained from the run-off plots at the Mississippi

agricultural experiment station which bear out statements concerning the protection given by close-growing cover crops incorporated in rotations.

Table 1. - Soil losses (pounds per acre) with and without crotalaria in corn.

Harper, F.B. Gold and green on the Palouse hills. U.S. Soil Conserv. Serv. Soil Conserv. 6(11):294-297, illus. May 1941. 1.6 So3S

Erosion findings on 33 sampled Palouse hills, their effect on crop yields and income and the results of control practices.

Mukherjee, B. The control of soil erosion in the West and its lessons for India. Indian Jour. Econ. 21(3):269-284. Jan. 1941. 280.8 In22

Reiche, Parry. Erosion stages of the Arizona Plateau as reflected in a headwater drainage area. Plateau 13(4):[53]-64, illus. Apr. 1941.

The area studied is the Navajo experiment station of the U.S. Soil Conservation Service.

Thornthwaite, C.W., Sharpe, C.F.S. and Dosch, E.F. Climate of the Southwest in relation to accelerated erosion. U.S. Soil Conserv. Serv. Soil Conserv. 6(11):298-302, 304, illus. May 1941. 1.6 So3S

"Literature cited," p. 304.

Wilkinson, J.W. Soil erosion control. Rural New Yorker 100(5506):391, illus. June 28, 1941. 6 R88

Soil Erosion and Control. Foreign Countries

Beard, J.S. Soil erosion on the island of Chacachacare, Trinidad, B.W.I. U.S. Trop. For. Expt. Sta. Caribbean Forester 2(3):136-137. Apr. 1941. 1.9622 T2023

Coster, Ch. Begroeiing, grondsoort en erosie. Bergcultures 15(16): 488-498. Apr. 19, 1941. 22.5 B45

Dutch. Translated title: Vegetation, types of soil and erosion.

Döhse, C.H. The farmer's part in combating soil erosion. Farming in So. Africa 16(181):148. Apr. 1941. 24 So842

Soil erosion prevention in South Africa.

Erosion control - the Burdekin River benefited area. Queensland Agr. Jour. 55(Pt. 3):242. Mar. 1, 1941. 23 Q33

"Following the enactment of legislation last year to provide for the control of erosion in the Burdekin River area, an Order in Council has been issued under 'The Burdekin River Trust Act of 1940' creating 'The Burdekin River Benefited Area,' which comprises Divisions 1, 2, and 3 of the Shire of Ayr as the area to which the provisions of this legislation will apply.

"Arrangements are in hand for the constitution of the Burdekin River Trust to discharge the functions and duties imposed under the Act."

Entire article quoted.

Gertenbach, J.J. Necessity for terrace banks in arable land of the Orange Free State. Farming in So.Africa 16(182):173-174. May 1941. 24 So842

Ghize, Alef de My grandmother's battlefield. Land 1(2):81-83. Spring Issue, 1941. 279.8 L22

The story of the ruining of a 250 acre field in Russia by changing the type of cultivation and planting the field into wheat.

Hanson, A.P. Erosion control plot. Jamaica Agr.Soc.Jour.45(4):127,129. Apr.1941. 8 J223

A description of plot developed for demonstration purposes by the Jamaica Agricultural Society.

No dust-bowl areas here yet but America says, "Beware". Land [Sydney] no.1562, p.2. May 2, 1941. 23 L22

"Although he has found nothing in the drier districts of Australia to compare with the American dust-bowl, Mr.R.G.Bowman, a visiting American soil erosion expert, warns Australians to be cautious.

"Mr.Bowman is making a tour of Australia investigating soil conditions and other aspects of agriculture for submission, in the form of a report to an Advisory Committee specially set up by President Roosevelt.

"In the mallee country he has visited, Mr.Bowman said he saw an area where signs of the recent drought were all too apparent.

"However, I have seen no dust-bowl comparable to those in America," he added. "But I have seen signs that no less surely indicate conditions that are of great significance from a future settlement point of view."

"Referring to the condition of pastures in the drier parts of Australia, Mr.Bowman said he did not believe that the native Australian pastures had gone back as markedly as might be thought. On the other hand, to counteract the undeniable fact that the pastures had gone back in some places, there was an urgent need to discover some remedy.

"Added to the methods at present being inquired into, there might be tried the better distribution of water and stock over the land. In other words, water conservation on a wide scale was possibly imperative.

"He praised the intelligence which had gone into the planning and development of irrigation along the Murray River."

Entire article quoted.

Parish, E. Showing the way in agricultural problems and possibilities. Farming in So.Africa 16(182):155-156. May 1941. 24 So842

"Under the above title are published the views and wishes of the Department of Agriculture and Forestry, as expressed editorially, in regard to various matters that concern farmers.

"The soil, which had never been very productive, was exhausted by poor husbandry and continuous cropping so that soil erosion set in and proceeded at an alarming rate throughout certain areas. In order to counter this menace the Government organized a country-wide anti-soil-erosion campaign which consisted mainly in the construction of engineering works such as small dams and contour furrows, but, though these measures were effective and of a long-term nature, they did not go to

the root of the evil which was to be found in the farming system followed in most parts of the country. This evil could be eliminated only through revolutionizing the farming system, which, again, could be brought about only by demonstrating to farmers the benefits of the practices advocated by the Department of Agriculture."

Entire part on soil quoted.

Rode, M.C.H. How to protect earth embankments from being washed off by rain. Farming in So. Africa 16(182):162. May 1941. 24 So842

"Protection against rain is one of the difficult problems connected with the maintenance of earth embankments in the Karoo where, notwithstanding a comparatively low rainfall, specific downpours are extremely severe."

Si-Tambang. Stammen uit de practik. Reconstructie van zwaar uitgespoelde tuinpaden in geaccidenteerd terrein. Bergcultures 15(10):304-305. Mar. 8, 1941. 22.5 B45

Dutch. Translated title: Opinions from practice. Reconstruction of severely washed out plantation paths on uneven terrain.

A system for overcoming erosion as illustrated by figures. The drain is the most important factor. The author does not claim this system as a new invention but states he finds it useful and inexpensive.

Soil conservation research station [New South Wales] Hawkesbury Agr. Col. Jour. 38(4):43. Apr. 30, 1941. 276.8 H31

"Designed to investigate the problem of soil erosion by practical observation, and to plan remedial measures, the first soil conservation and erosion research station under the Soil Conservation Act (1938) was officially opened at Cowra recently. Experiments relating to soil and water losses from areas of diverse soil types devoted to different land use practices, the design of contour drains, safe water disposal outlets, grassed waterways, and natural and artificial forestry and pasture rehabilitation schemes will be carried out at Cowra. Engineering, forestry, soil and agrostological aspects will each receive consideration, and all factors of significance in deciding a suitable erosion technique will be determined."

Soil erosion control. Spillways and silt dams on Goulburn (N.S.W.) property. Past. Rev. 51(5):370. May 16, 1941. 23 Au75

[The South African forest and veld conservation act, 1941.] So. Africa Govt. Gaz. 124(2890):14-41. Apr. 12, 1941. 270 So85

"Act to amend and consolidate the laws in the Union relating to the tenure, demarcation, protection, management and utilization of forests and the regulation of veld-burning, to regulate trade in, and the use of trade names and marks in connection with forest produce, to control the exportation and importation thereof, and to make better provision for veld, soil and water conservation."

Valles, Edgar. A erosao do solo - suas causas, formas e efeitos. Agros 24(1):18-22, illus. Jan./Feb. 1941. 15.5 Ag82

Portuguese. Translated title: Erosion of the soil - its causes, forms and results.

"Bibliografia," p. 22.

Vine, Ronald. Disciplining an unruly river... Erosion difficulties at Ruatoki. New Zeal. Farmer Weekly 62(10):5, illus. May 8, 1941. 23 N484
Article consists of explanation of three photographs.

"The Whakatane River, where it flows into the Ruatoki valley, provides perhaps the best example that you will find anywhere of the work of river erosion. Subject to severe flooding on this broad flat valley bed, this river may change its course half a dozen times in as many years. Indeed it may and does - provide itself with half a dozen different courses. It bites off great sections of valuable land and makes islands of them, and a man realises that farming is indeed a precarious occupation when he knows his land may be here one year and gone the next. Since the native lands of the Ruatoki valley have been systematically farmed under the development scheme, at least 160 acres of good farm land have been washed away by this imperious river."

White, Stanhope. The agricultural economy of the Hill Pagans of Dikwa Emirate, Cameroons (British Mandate). Empire Jour. Expt. Agr. 9(33):[65]-72, illus. Jan. 1941. 10 Em7

Soil conservation and prevention of soil erosion, pp. 67-68.

Particular mention is made of the hills, "covered from foot to summit with an endless system of dry-stone wall terraces," ranging in width from a few inches to many feet.

"Small water-courses on the hills are confined to narrow channels between terraces, whilst on the plains lines of dashi (H.¹), Balsanodendron africanum, and kerana (H.), Euphorbia barteri or E. candelabrum, are planted across lines of erosion and effectually prevent anything in the nature of gully or 'donga' formation."

Soil Studies

Benevol'sky, S.A. Permeability of podzol soils. Trudy Inst. Sever. Zern. Khoz. no. 1, pp. 65-85. 1939; Pedology no. 2, p. 103. 1940. 57.8 P34

"The permeability of the A₁ horizon was considerably higher than of the A₂ horizon. Cultivation increased the permeability of the podzol horizon." Abs. Imp. Bur. Soil Sci. Soils and Fert. 4(2):71. 1941.

Brener, W.H. and Wilde, S.A. The effect of non-legume green manure upon the fertility of forest nursery soils. Jour. Forestry 39(5):[478]-482, illus. May 1941. 99.8 F768

"Literature cited," pp. 481-482.

"No appreciable improvement in the fertility of nursery soils is likely to be obtained by rotations with non-legumes unless a complete fertilizer is applied prior to seeding the green manure crop. Green manuring by means of a 'catch crop' converts the commercial fertilizers into plant tissue thereby reducing the loss of nutrients by leaching. This conversion also eliminates any danger of chemical injury to the roots of seedlings by the soluble salts, and promotes the production of physiologically balanced nursery stock."

Durfee, Warner. Questioning the soil. Cornell Countryman 38(9):129. June 1941. 6 C81

Use of the lysimeter in ascertaining the extent to which calcium is renewed by drainage water and by crops and to study certain changes that accompany the loss of calcium.

Soil water test. Hoard's Dairyman 86(13):437. July 10, 1941. 44.8 H65

"A Michigan State College research man has developed a device that will reveal how much soil moisture is available for plant growth without waiting two or three months for results under old methods. It's like reading the mind of the soil, if soil had a mind.

"Dr. G. J. Bouyoucos of the soils department staff of the college performed the miracle. In 20 to 30 seconds, with the variation of the Wheatstone bridge, which measures electrical resistance, the device he developed can tell the amount of soil moisture the soil is able to release from between soil particles.

"Old methods involved lifting a section of soil and putting this in a greenhouse under controlled conditions, waiting for growing plants to wilt. Now the test is taken right in the field.

"Briefly, the method permits more accurate knowledge for applying the most efficient volume of water in irrigation. It can tell when to irrigate and when enough water has been applied.

"A porous absorption block about the size of a pocket matchbox is buried in the field. Wires lead to the surface. This block is made of plaster of paris and it takes on moisture or gives it up just as does the soil surrounding it. When moisture is available, resistance is proportionately less than when the soil and the test block do not have as much moisture. This variation can be determined accurately by the resistance device which is equipped with earphones for accurate readings. The equipment weighs but 10 pounds."

Entire article quoted.

Stubble Mulch

Bennett, H. H. New tillage methods cited. U.S. Soil Conserv. Serv. Soil Conserv. 6(12):314-316. June 1941. 1.6 So38

"From the printed record of hearings before the Subcommittee of the Committee on Appropriations, House of Representatives, considering Department of Agriculture Appropriations for 1942."

Cites a new method of plowing which leaves the stubble and other crop residues.

Parkins, J. H. Field tests on the effectiveness of trashy fallow and contour seeding in controlling erosion. Northwest Sci. 14(4):88-89, illus. Dec. 1940. 470. N81

Rutherford, D. M. "Stubble mulch" is promising. Pacific Rural Press and Calif. Farmer 141(6):226-227, illus. Mar. 22, 1941. 6 P112

Terracing

Anderson, H. B. (Mrs.) The rice terraces of Luzon. Garden Club Amer. Bul. no. 15, pp. 51-57. May 1941. 90.32 G16

A vivid description of the ancient terraces in the Ifuago country, Philippine Islands.

Terraces save soil. Mo. Farmer 33(12):11. June 15, 1941. 6 M696

"Ben Banwart in Barton County [Mo.] has already been repaid for terracing a 30-acre field last fall, when the field stood through

7 inches of rain in one week during April with practically no soil loss. Thousands of tons of soil were lost from other fields in the neighborhood. Banwart's farm had been washing considerably in spite of good farming practices, and two years ago his son Raymond attended a soil conservation school, held by the county extension agent, to learn something about terracing. Last August they laid out two miles of terrace lines and a grass water-way in the 30-acre field, and with few gullies to cross, the terrace construction was completed in three days at a cost of approximately \$52. The field was then seeded to barley and wheat on the contour, on about two-thirds of the field, and the rest seeded to red top."

Entire article quoted.

Tree Rings

Friesner, R.C. and Friesner, G.M. Relation of annual ring formation to rainfall. As illustrated in six species of trees in Marshall County, Indiana. Butler Univ. Bot. Studies 5(1-8):95-112, illus. Apr. 1941. 451 B97
"Literature cited," pp. 111-112.

Glock, W.S. The response of trees to climate. Pacific Sci. Cong. Proc. (1939) 6th, v. 3, pp. 617-619.

Schulman, Edmund. Precipitation records in California tree rings. Pacific Sci. Cong. Proc. (1939) 6th, v. 3, pp. 701-717.

Trees

Fox, A.C. Tree planting in the Soil conservation service. N. Dak. Outdoors 3(8):[8]-[9], 14, illus. Feb. 1941. 412.9 N815

"Trees, shrubs and vines play an important role in conserving soil, moisture and wildlife. Of no less importance is the value derived from fruit, berries, fence posts, fuel wood and increased land value; the aesthetic value and increased comfort to the farm family and community cannot be measured."

Sidki, I. Brief notes on the necessity of promoting private tree planting in Cyprus. Cyprus Forestry Assoc. Jour. 2(3):15-18. June 1940. 99.9 C993

Conservation from the following points of view: (1) Climate and atmospheric conditions; (2) Water supply; (3) Erosion and inundation; (4) Supply of forest produce; (5) Employment; (6) Amenities.

Vegetation

Booth, W.E. Revegetation of abandoned fields in Kansas and Oklahoma. Amer. Jour. Bot. 28(5):415-422, illus. May 1941. 450 Am36

"Literature cited," p. 422.

In his summary, the writer states "the sequence of the stages of plant succession is as follows: weed, annual grass, perennial bunch grass, fully-developed prairie. Under favorable conditions the weed stage lasts for two years, the annual grass from nine to thirteen years, and the bunch grass for an undetermined length of time. The oldest abandoned field

examined in this stage was thirty years old, and it did not appear to be nearing the fully-developed prairie stage.

"Heavy pasturing and burning are a hindrance to plant succession and may cause the fields to remain unproductive much longer than would otherwise be necessary.

"Certain blue-green algae play an important role in the prevention of soil erosion and may thus compensate for the inadequacies of the seed plants.

"Plant succession can be stimulated by cultural practices such as terracing and contour furrowing.

"Natural revegetation of gullies should not be relied upon. The control of gullies, by methods in accordance with land values, should be practiced before the injury to future forage production is excessive."

Waiatua. Protection forest canopy. Limitations of unaided re-growth. Forest and Bird Bul. no. 60, pp. 4-5. May 1941. 413.9 N42

An attempt to arouse official action on "re-growth" of vegetation in New Zealand.

Water

Coventry, A.F. Desiccation in southern Ontario. Roy. Soc. Canada, Trans. Sect. 5 (1940) 34:15-23.

"References," pp. 22-23.

"The water situation discussed is bound up with widespread sheet erosion. It is suggested that the conditions, which arose from uncontrolled exploitation of the forests and the land, are likely to become worse." Abs. Imp. Bur. Soil Sci. Soils and Fert. 4(2):99. 1941.

Debler, E.B. Consumptive use of water for agriculture. Amer. Soc. Civ. Engin. Proc. 67(6):1191-1192. June 1941. 290.9 Am3P

Discussion of paper by Robert L. Lowry and Arthur F. Johnson, published in April, 1941, Proceedings.

Exhibit "A". Report of the sub-committee to the committee on Western water problems of the Engineering Institute of Canada. Engin. Jour. 24(5):224-229, illus. May 1941. 290.9 En3

Proposed diversions, storages, and distribution systems to fully utilize Canada's share of the international waters of the St. Mary and Milk rivers.

Report of the Committee on Western water problems. Engin. Jour. 24(5): 222-223. May 1941. 290.9 En3

A report on a study of the problem of water distribution in the drought areas of the Canadian western provinces prepared by a committee of the Engineering Institute of Canada.

Water Facilities Program

Phillips, George. Water facilities program speeding up. U.S. Bur. Agr. Econ. Agr. Situation 25(6):14-15, illus. June 1941. 1 Ec7Ag

"After getting off to a relatively slow start in the fall of 1937 and the spring of 1938, the Department's Water Facilities Program is

beginning to gather momentum. It is entirely possible that during 1941 more farmers and ranchers will take advantage of the assistance offered under the program than in all previous years of its operation...

"Under the arrangements for administering the Water Facilities Act, the Department of Agriculture utilizes three of its agencies which are particularly equipped to contribute to an effective service program. The Bureau of Agricultural Economics takes leadership in developing the broad plans for areas in which operations may be conducted.

"Generally, the Farm Security Administration lends the money for the construction of the facilities and the Soil Conservation Service plans the systems and designs the structural work."

Wildlife Conservation

Armfield, R.B. Natural plants among rock outcroppings offer suitable wildlife coverts. N.C. Wildlife Conserv. 5(5):12, 15, illus. May 1941. 279.8 N812

Gabrielson, I.N. A future program for wildlife conservation. Md. Conserv. 18(2):17-21, illus. Spring Issue, 1941. 279.8 M36

"An address by... Director of the Fish and Wildlife Service, United States Department of the Interior, delivered on the opening day of the Sixth North American Wildlife Conference, in Memphis, Tennessee, on Monday, February 17, 1941."

Girard, G.L. The mallard: its management in western Montana. Jour. Wildlife Managt. 5(3):233-259, illus. July 1941. 410 J827

Wildlife in hayfields. Ohio Farmer 187(13):3. June 28, 1941. 6 Oh3

"Every year thousands of nesting pheasants and other game birds are killed in Ohio by mowers during the haying season. A great reduction in these fatalities has been made by the use of flushing bars attached in front of the cutter bar.

"An idea has been advanced by H.W. Olds of the Ohio Division of Conservation, who suggests that operators of mowing machines cut their first swath thru the middle of the field and work outward, rather than to circle the field and work inward. When the field is circled, game is concentrated gradually in the center of the field, and the last few swaths endanger the life of this concentrated game. By reversing the procedure, wildlife will be gradually driven to the outer margin of the field."

Engire article quoted.

Wind Erosion Control

Hedge, A.M. District gives blow land new 95-year lease on life. U.S. Soil Conserv. Serv. Soil Conserv. 6(11):275-276. May 1941. 1.6 So3S

An explanation of the arrangement between the West Ottawa Michigan Soil Conservation District and the Ottawa county board of supervisors providing for a long-term plan of conservation management on once chronically tax-delinquent lands with the district.

Lord, Russell. "Desert corn" and other protective cultivation on the plains. Country Life[Garden City, N.Y.]80(2):40-41, illus. June 1941. 80 C832

Wind erosion control in the conservation demonstration area near Bottineau, North Dakota.

Windbreaks

Chapman, G.W. Windbreaks. Cyprus Forestry Assoc. Jour.2(3):19-22, illus. June 1940. 99.9 C993

A discussion of some findings regarding windbreaks used on the plains of southern Russia, for the benefit of Cyprus farmers.

BOOK AND PAMPHLET NOTES AND ABSTRACTS

Addison, Herbert. Hydraulic measurements. A manual for engineers. 301pp., illus. London, Chapman & Hall, Ltd., 1940. 290 Ad2H

"Bibliography," pp.287-296.

This book is an amplification of the last chapter of the author's earlier work "A textbook of applied hydraulics," and is thought to be, according to the preface, the only book available on the subject.

It deals with liquids only.

American society of agronomy. Hunger signs in crops. A symposium... 327pp., illus. Washington, D.C., American society of agronomy and the National fertilizer association, 1941. 463.34 Am3

Plants covered are tobacco, corn, small grains, potato, cotton, vegetable or truck-crop plants, deciduous fruits, legumes.

This study "marks one more step in the study of nutrition from the soil on up through man. What the soil does not have, plants will not get, and animals and men will lack also. The welfare of man is intimately bound up with the welfare of soils and plants because all our food comes in the first instance from plants." So it is of primary interest to anyone concerned with the proper management of soils and crops.

Association of land-grant colleges and universities. Proceedings, fifty-fourth annual convention, Chicago, Illinois, Nov.11-13, 1940. 351pp. [n.p., 1941] 4 As7 54th Nov.1940

Partial contents: Agriculture in the defense program, by Chester C. Davis, pp.79-85; Two years of land-use planning; an evaluation and a forward look, (abstract), by M.L. Wilson, pp.160-164.

Baldrige, C.C. [and] Taylor, C.W. 1940 rural education moving forward. Nebr. Dept. Pub. Instr. Bul. K. 242pp., illus.

Supplementary unit: soil and moisture conservation, prepared by C.W. Buck, p.223.

Bose, N.K. and Ghulati, T.D. Experiments for silt control on a model of the Emerson barrage, left undersluices, left regulator with a part of the river Chenab upstream. Punjab Irrig. Res. Inst. Res. Pub. v.2, no.25. 11pp., illus. Lahore, 1939. 55.9 P96

Bose, N.K. and Gulati, L.T.D. Experiments for the Haveli project on a model of the rivers Jhelum and Chenab downstream of their confluence. Punjab Irrig. Res. Inst. Res. Pub. v.2, no.24. 58pp., illus. Lahore, 1939. 55.9 P96

"These experiments were carried out in three stages - (1) Construction period; (2) Diversion period; (3) Post diversion period. Following are the conclusions arrived at from these experiments:-

"Construction period. (1) There was severe action on the downstream nose of the right guide bank. It was turned round to avoid this action.

"(2) In consequence of this the belas on the downstream of the weir will not be washed away quickly and a regular standing wave will not form in the first year.

"Post diversion period. (1) Due to non-formation of the standing wave the upstream gauges will be affected in high discharges and will be higher than one would expect if the standing wave had formed.

"(2) A small bela will be formed near the Right Guide Bank.

"(3) There will be a cross flow from right to left of the weir during low supply; and during high supply as the river strikes the left divide wall at an angle a deep scour hole will be formed at the nose of the divide wall."

Burma. Dept. of agriculture. Report on the operations for the year ended the 31st March 1940. 275pp., tables. Rangoon, Supt. Govt. print. and stationery, 1940. 22 B92R2 1939/40

Soil erosion, pp.37-39. Tables indicate amount of run-off and eroded material from three types of soil in the Myingyan district.

California. Dept. of public works. Report of director of public works on emergency flood conditions prepared pursuant to proclamation of the governor of California, dated March 5, 1940. 50pp., illus., mimeogr. [n.p.] Mar. 28, 1940. 290 C1281R

Covers the nature and extent of the storm and flood, and damages resulting therefrom and discusses a program of rehabilitation and permanent remedial flood control measures.

Chase, Agnes. Studying the grasses of Venezuela. In U.S. Smithsonian institution. Explorations and field work of the Smithsonian institution in 1940, pp.61-66, illus. Washington, U.S. Govt. print. off., Apr. 3, 1941. 500 Sm6Exp 1940

Miss Chase mentions soil erosion in several places as follows: "In the vicinity of Caracas and eastward 'cana brava', Gyncrium sagittatum, a grass 20 to 30 feet tall, is conspicuous along the streams and in moist ground. It is an unsurpassed soil-binder and is extensively used for roofing... We made our headquarters... near Rio Tigre. The region is flat, wind-swept savanna with scattered low trees mostly bent toward the west. Much of the grassland has been burned year after year, and the soil is terribly eroded, the fine topsoil entirely gone, exposing the coarse gravel in many places. Tiny hummocks of Oncostylis paradoxa, a sedge with short, curled foliage, clung to the earth with 2 or 3 inches of burned bast exposed by wind erosion... The land is so flat there is relatively little evidence of the results of water erosion, such as gullies and badlands, the water soaking into the coarse gravel."

Chase, Stuart. What the new census means. Pub.Aff.Com.Pub.Aff.Pam.56.
30pp. New York[1941] 280.9 P964
Population;land and houses;and run-down areas are included in this
interpretation of the 1940 census.

Deusing, Murl. Soil, water, and man. 47pp., illus. Evanston, Ill., Row,
Peterson & co., [c1941] 279.12 D48
Edited by Helen M. Strong.

Florida state planning board. Conserving land and water resources.
Brief description of the purpose and organization of the Southeastern
Florida joint resources investigation. 12pp. Tallahassee, Jan.
1941. 280.7 F66C

Plans for investigations on soil and water conservation in the
Everglades, including irrigation, drainage, controlling groundwater
levels and the relation of moisture condition on undeveloped lands
to fire hazards on such lands.

Gourley, J.H. and Howlett, F.S. Modern fruit production. 579pp., illus.
New York, Macmillan, 1941. 93.02 G742

References at end of each chapter.

Chapters 5 and 6 on Laying out and planting the orchard; and Cultural
practices in orchards incorporate directions for soil conservation,
contour planting and terracing.

Grenada. Agricultural dept. Report... 1939-1940. 6pp. Grenada,
Govt. printer, 1941. 102 W524 1939-40

Soil erosion, p.4. "Much propaganda work has been done in Carriacou in
drawing the attention of cultivators to the serious conditions of
eroding hillside lands and the need for immediate measures for con-
serving the soil. Demonstration plots in soil conservation methods
were laid out at fourteen centres.

Entire section quoted.

Idaho department of reclamation. Eleventh biennial report 1939-1940.
306pp. Boise[1941?] 292.9 Id1 11th, 1939-40

Partial contents: Case-Wheeler act, pp.44; Case-Wheeler act as amended,
pp.45-51; Snow surveys and water supply forecasts, Division of irriga-
tion, Soil conservation, pp.51-53; Department of agriculture, water facili-
ties program, pp.53-55; List of constructed dams in Idaho, pp.65-66; Water
laws of Idaho, pp.67-306.

Kristal, F.A. and Annett, F.A. Pumps, types, selection, installation, operation
and maintenance. 339pp., illus. New York, McGraw-Hill book co., inc.,
1940. 291 K89

Treats of problems of design and operation. Chapter VII is on deep-
well pumps.

Landsford, W.F. and Dugan, W.G. An analytical and experimental study of
the hydraulic ram. Ill. Engin. Expt. Sta. Bul. Ser. 326. 70pp., illus.
Urbana, Jan. 21, 1941. 290.9 Il62B no. 326
"Selected bibliography," p.68.

Lawrence, W.E. Studies in range and pasture botany. Prelim.ed., v.p., processed. Corvallis, O.S.C. Cooperative Assoc., [c1940] 60 L43 Prelim.ed.

"This assembly of study material is an attempt to partly meet the need for more accessible information on the general subject of range ecology..." Preface.

Mehta, M.L. The formation and the reclamation of thur lands in the Punjab. Punjab Irrig. Res. Inst. Res. Pub. v.3, no.4. 54pp., illus. Lahore, 1940. 55.9 P96 v.3, no.4

"References," p.38.

Summary. "1. From the thur surveys carried out it is known that over 5 lakhs acres of cultivated land have become thur in the canal irrigated tracts of the province and that the rate of increase is approximately 25,000 acres per annum.

"2. The factors operative in the formation of thur at the soil surface have been discussed. It has been shown that the upward movement of the zone of accumulation of salts in the soil crust due to lighter irrigations than formerly is at least partially responsible for the accumulation of salts at the soil surface.

"3. The chemical reactions involved and the physical changes produced in the soil during the process of the deterioration of land have been described and it has been shown that the damage is attributable largely to the conversion of the anhydrous salt to the crystalline form under humid atmospheric conditions.

"4. The methods for the reclamation of thur lands in different stages of deterioration have been given. Costs have been worked out. These indicate that reclamation is a paying proposition if it is taken up at an early stage of deterioration.

"5. From the data obtained it has been shown that land once reclaimed has not evidenced any signs of deterioration for a period of seven years. The examination of soil profiles of reclaimed land indicates that a return to the deteriorated condition is unlikely.

"Suggestions have been made to modify temporarily the agricultural practice of the country so that further deterioration due to thur formation can be prevented. Methods for the prevention of deterioration in the case of new irrigation projects have been put forward.

Nebraska state board of agriculture. Proceedings of the annual meeting... Lincoln, January 23rd and 24th, 1940. 588pp., illus. [Lincoln? 1940] 2 N27R 1940

Is also Annual report for the year 1940.

Partial contents: New methods of rainfall and soil moisture conservation, by F.L. Duley and J.C. Russell, pp.121-131; The movement of soil moisture by M.D. Weldon, pp.132-135; Soil and crop management practices, by P.J. Stewart, pp.135-142 New attacks on the erosion problem, by E.H. Doll, pp.148-153; Practical management of the irrigated farm, by J.G. Kunz, pp.161-169.

North Dakota geological survey. Maps and graphs prepared for the water resources committee, North Dakota state planning board. N.Dak. Geol. Survey. Cir.3. 51pp., illus., mimeogr. Grand Works[n.d.] 406 N813C no.3

The maps and graphs indicate climatic and hydrologic conditions, including change in ground water levels, and limits of watersheds.

Peattie, Roderick. Geography in human destiny. 323pp., illus.
New York, George W. Stewart, c1940. 278 P32

The author says that he has "tried to write a book about the progress of man, how, tilling the soil and sailing ships, he has gradually come intelligently to bend this earth more and more to his purpose."

The last chapter is entitled, "National conservation is socialism," and is an explanation of "the new geography, conservation" which, quoting the author, "is not man's adaptation of the earth to his individual purpose. It is the intelligent, long-range use of natural resources for the needs of a group and their descendants. It is a planned economy, which must eliminate false economics and disregard the selfish rights of the individual. National conservation is socialism."

Pickels, G.W. Drainage and flood-control engineering. Ed. 2, 476pp., illus. New York, McGraw-Hill book co., inc., 1941. 54 P58 Ed. 2

References at end of each chapter.

Subjects covered are precipitation, flood run-off, stream discharge measurements, flow of water in open channels, flow of water in tile drains, land drainage by open channels, soil physics, underdrainage, pumping plants for drainage districts, flood protection by channel improvement, flood protection by levees, flood prevention by reservoirs, and drainage laws.

Pulaski county, Ark. planning board. Water resources and problems of Pulaski county, Arkansas. 53pp., illus. Little Rock, Dec. 1940. 280.7 P96W

General physical description, ground waters, water uses and problems, such as flood control, erosion control and water conservation.

Tom, C.A. Time requirements for farm operations on strip cropped and non-strip cropped farms. A thesis presented to the faculty of the graduate school of Cornell university in partial fulfillment of the requirements for the degree of master of science in agriculture. 30pp., typed. [n.p.] June 17, 1940. 283 T59

Have also adaptation from this thesis issued as: Cornell university. College of agriculture. Dept. of agricultural economics and farm management. AE no. 329. (281.9 C81 no. 329)

Turneaur, F.E. and Russell, H.L. Public water supplies, requirements, resources, and the construction of works. Ed. 4, rev., 704pp., illus. New York, John Wiley & sons, inc., 1940. 292 T85 Ed. 4

Covers the following subjects: Rainfall; evaporation and percolation; flow of streams; ground water; construction of water works; works for the collection of ground water; impounding reservoirs; earthen dams.

Virginia. Commission of game and inland fisheries. Suggested unit material prepared to show how pupil experiences in conservation of renewable natural resources may be provided in the second year of the core curriculum of secondary schools. 21pp., mimeogr. Blacksburg, Sept. 1940. 279 V81

Selected references at end of each unit.

Vogel, H.D. Protection of beds and banks of inland waterways, deep water channels and drainage canals. 8pp., illus., processed. [n.p.] 1940. Reprint Col.

Reprint of paper prepared for the XVII International navigation congress.

At head of title: American section, Permanent international association of navigation congresses.

Reasons for protection, methods and causes of bank failures, preventive maintenance of banks, revetment requirements, types of revetment in general use.

STATE EXPERIMENT STATION AND EXTENSION PUBLICATIONS

Delaware

Bausman, R.O. An economic study of land utilization in New Castle county, Delaware. Del. Agr. Expt. Sta. Bul. 228. 74pp., illus. Newark, Feb. 1941. 100 D37S no. 228

Includes a land classification map of the county.

Idaho

Idaho agricultural experiment station. Report of progress in solving Idaho's farm problems. Forty-eighth annual report for the year ending December 31, 1940. 78pp., illus. Moscow, Apr. 1941. 100 Id1 1940
Issued as Bulletin 239.

Items of interest are: Organic matter additions to soil very important (effect on soil and water loss), p. 32; Land reclamation and conservation research, p. 38; Feasibility of supplementing spring run-off irrigation water determined (table shows farm records and budgets on a typical farm in Mann's creek illustrating the possible increases in farm income from all-season irrigation in contrast to spring run-off) pp. 41-42; Seeding burned-over land studied (report from Sandpoint branch station as to species that were able to establish readily) pp. 72-74.

Indiana

Kohlmeyer, J.B. Major land use problems in Martin county, Indiana, with suggestions for programs and policies. Ind. Agr. Expt. Sta. Bul. 453. 34pp., appendix, illus. [Lafayette] Oct. 1940. 100 In2P no. 453

The objective of this study is said to be the focusing of the relationship of social and economic maladjustments to improper land use.

"From this study it appears that the following long-time policies and programs of action are needed. 1. The retirement of land not adapted to cultivation. 2. Revision of the school fund mortgage loan system. 3. Administration of tax reverted land by the state. 4. Local government reorganization and township consolidation. 5. Maintenance of efficient state aids. 6. Coordination of road, school and other public works programs with desirable land use pattern as suggested in the land

classification.7.Continuation of local land use discussions.8.Investigation of rural zoning as a directional land use measure.9.Further research pertaining to management practices and best suited uses for both the agricultural and non-agricultural areas.

Minnesota

Howe, O.W. Planning the physical layout of farms. Minn.Agr.Expt.Sta. Bul.350. 20pp.,illus. [University Farm,St.Paul] June 1940. 100 M66 no.350
Presents a systematic procedure and technique in planning a farm layout to provide for land clearing, drainage, erosion control, irrigation field design, crop rotations, farmstead layout and fencing.

Missouri

Silkett, R.J. Land and fiscal problems in Reynolds county, Missouri. Mo.Agr.Expt.Sta.Res.Bul.324. 80pp.,illus. Columbia, Dec. 1940. 100 M693 no.324
Describes and analyzes land use and related problems in the hilly region of the central Ozarks. The bulletin is divided by topics as follows: Settlement and population of Reynolds county; utilization of land and related factors in Reynolds county; fiscal problems of local government; adjustments in progress; future land use and needed institutional adjustments.

New Mexico

Burnham, D.R. Grape production in eastern New Mexico. N.Mex.Agr.Expt. Sta.Bul.275. 23pp.,illus. State College, Mar.1941. 100 N465 no.275
Soil-blowing hazards, pp.12-13.
Cockerill, P.W., Hunter, Byron and Pingrey, H.B. Type of farming and ranching areas in New Mexico. Part II. N.Mex.Agr.Expt.Sta.Bul.267. 134pp., illus. State College, Dec.1939. 100 N465 no.267

Tennessee

Tennessee.Agricultural experiment station. Fifty-second annual report, 1939. 79pp.,illus. Knoxville, 1939. 100 T25S 52d, 1939

Texas

Texas.Agricultural experiment station. Fifty-second annual report, 1939. 304pp. College Station[1940?] 100 T31S 1939
The report of substation no.2, Tyler, includes Soil and water conservation investigations, pp.151-154, by J.B.Pope, O.C.Word and J.C.Archer.

Utah

Utah.Agricultural experiment station. Research aids in Utah agriculture. Biennial report...1938-1940. 118pp.,illus. Logan, 1940. 100 Utl

Virginia

Seitz, C.E. Soil and water conservation investigations in Virginia 1936-1939. Progress report. Va. Agr. Expt. Sta. Multigraph Rpt. 1. 54pp., illus., processed. Blacksburg, June 1940. 100 V81Mu no. 1
Cooperating agencies: Virginia agricultural experiment station, Soil conservation service, Tennessee valley authority.

Wisconsin

McNeal, Wakelin. Conservation club work. Wis. Agr. Col. Ext. Cir. 4H 35. 16pp., illus. Madison, Mar. 1941. 275.29 W75Cf no. 35

U. S. GOVERNMENT PUBLICATIONS

Agriculture Department

Pallesen, J.E. and Laude, H.H. Seasonal distribution of rainfall in relation to yield of winter wheat. U.S. Dept. Agr. Tech. Bul. 761. 12pp., illus. Washington, U.S. Govt. print. off., Jan. 1941. 1 Ag84T no. 761
"Literature cited," p. 11.

Pechane, J.F. Application of analysis of covariance to range research data. U.S. Forest and Range Expt. Sta. Intermountain Tech. Note 1. 21pp., illus., mimeogr. Ogden, Feb. 27, 1941. 1.9621 R4T22
Bibliography, pp. 20-21.

U.S. Bureau of agricultural economics. Landownership in Wyoming in 1935, by Tom Bennard. 25pp., mimeogr. Washington, D.C. Mar. 1941. 1.941L2L23
"The purpose of this... study is to show: (1) the disposition of the public domain in Wyoming; (2) the present landownership pattern; (3) the control and management of publicly-owned lands; and (4) the problems associated with the ownership pattern."

U.S. Bureau of plant industry. Division of forage crops and diseases. Diseases of some forage legumes grown in nurseries, by Howard W. Johnson William C. Davis. 10pp., mimeogr. [Washington, D.C.] May 15, 1941. 1.965 F2D63

U.S. Dept. of agriculture. State legislation for better land use. A special report by an interbureau committee. 122pp. Washington, U.S. Govt. print. off., Apr. 1941. 1 Ag84S1
"Selected bibliography," pp. 118-122.

The following topics are discussed: Rural zoning; state water laws; soil conservation districts; farm tenancy law; the structure and function of rural local government; procedure for rural tax-delinquent lands; state land purchase for land use adjustment; management and development of state and county lands; interrelation of measures affecting land use.

U.S. Forest experiment station, Central states. Twelfth [annual] report for the year 1940. 56pp., mimeogr. Columbus [1941] 1.9 F76252 12th, 1940
Partial contents: Survey of farm woodland conditions in Illinois and Ohio, by R.E. Worthington, pp. 36-47.

Wickard, C.R. Farmers and defense. 40pp. Washington, D.C., American Council on public affairs [1941] 281.12 W63

Wilson, M.L. A theory of agricultural democracy. U.S. Ext. Serv. Cir. 355. 20pp., mimeogr. [Washington, D.C.] Mar. 1941. 1.913 A2W69 no. 355
An address before the American Political Science Association, Chicago, Ill., Dec. 28, 1940.

Soil Conservation Service

Bonsteel, J.A. and Bass, T.C. Erosion and related land use conditions in the Conestoga area, Pennsylvania. U.S. Soil Conserv. Serv. Erosion Survey 15. 52pp., illus., maps in box. Washington, U.S. Govt. print. off., 1940. 1.6 S031 no. 15

Brown, G.F. and Bauer, A.J. Strip cropping observations. U.S. Soil Conserv. Serv. Northeast Reg. Reg. Cir. 40. 2pp., mimeogr. Upper Darby, Apr. 12, 1941. 1.9601 R261 no. 40
A summary of observations made during the summer 1940 in the Indiana, Pennsylvania area where Gilpin, Rayne and Ernest soils predominate, and farming is of a general and dairying type, to determine where erosion was occurring and, if possible, the main factors causing erosion in strips.

Brown, M.H. and Nygard, I.J. Erosion and related land use conditions in Winona county, Minnesota. U.S. Soil Conserv. Serv. Erosion survey 17. 33pp., 74 fold. maps in box. Washington, U.S. Govt. print. off., Jan. 1941. 1.6 S031 no. 17

Bryson, J.L. What you should know about aerial photographs. U.S. Soil Conserv. Serv. Ohio Val. Reg. Admin. Pointers 6. 7pp., mimeogr. Dayton, May 9, 1941. 1.9603 Ad6 no. 6
States and answers a number of common questions relative to aerial photographs.

Frye, C.A. Cultivating clean-tilled row crops. U.S. Soil Conserv. Serv. Northeast Reg. Reg. Cir. No. 43, pp. [1-2]. Upper Darby, June 24, 1941. 1.9601 R261

"The intensive cultivation of clean-tilled row crops presents one of the most acute erosion problems in the region. This is particularly true when crops, such as potatoes, are planted up and down hill or even across the general slope. In some parts of the region, this problem has been solved to a very satisfactory degree by the use of contour cultivation and terracing."

Lowe, A.E. and Haas, H.J. The effect of various cropping systems on nitrogen and organic carbon at the Garden City experiment station [in Kansas] U.S. Soil Conserv. Serv. South. Great Plains Reg. South. Great Plains Messenger, June 15, 1941, pp. 17-23, illus. 1.9606 So32

Table I. Percent and pounds per acre in 1939 and gain or loss from sod to 1939 of nitrogen and organic carbon on seven cropping systems.

Table II. Carbon and organic content of the surface three feet of soil, the gain or loss from sod and the grain and stover yields for various cropping systems.

Table III. Average nitrogen and organic carbon percentage for seventeen basin project plots before breaking sod in 1938.

McGinnis, B.W. Healthy soil, men and democracy. U.S. Soil Conserv. Serv. South. Great Plains Reg. South. Great Plains Messenger, May 15, 1941, pp. [5-7]. 1.9606 So32

Morrish, R.H. Sod in orchards. U.S. Soil Conserv. Serv. Ohio Val. Reg. Tech. Notes 10. 3pp. Dayton, July 7, 1941. 1.9603 T22

"Conclusions: The use of vegetation in orchards is essential for soil erosion control.

"The sod in the orchard, as well as the tree, should be fertilized.

"In dry years living vegetation may cause serious competition for moisture with the tree.

"The use of mulch under the tree will help to eliminate this condition.

"Various methods of managements should be worked out to minimize moisture competition with the tree.

Nelson, C.R. Coloring of land use capability maps. U.S. Soil Conserv. Serv. Upper Miss. Reg. Prog. Exch. Tech. Sup. 2pp., mimeogr. Milwaukee, Mar. 21, 1941. 1.9604 P941

Nolla, J.A.B. y Crawford, G.L. La conservacion del suelo en Puerto Rico. 30pp., illus. Washington, U.S. Govt. print. off., 1941. 1.6 So3Co

Raths, H.J. The application of erosion control measures to prevent gullies by water discharging from highway culverts. U.S. Soil Conserv. Serv. Northeast. Reg. Reg. Cir. No. 42. 2pp., illus., processed. Upper Darby, June 24, 1941. 1.9601 R261 no. 42

Raths, H.J. Are diversion ditches worth-while? "Yes" say 60 Wyoming county, New York, farmers to the amount of \$63.03 annually per farm. U.S. Soil Conserv. Serv. Northeast. Reg. Reg. Cir. 35. 3pp., mimeogr. Upper Darby, Mar. 5, 1941. 1.9601 R261 no. 35

Tabulated results of findings and comments on a diversion ditch survey.

Taylor, C.A. Irrigation problems in citrus orchards. U.S. Dept. Agr. Farmers' Bul. 1876. 34pp., illus. Washington, U.S. Govt. print. off., 1941. 1 Ag84F no. 1876

"This bulletin reports a study of irrigation practices and yields in orchards in Los Angeles and San Bernardino Counties and recommends

certain improvements in methods of cultivation that will make for better use of water. Because conditions are similar in other areas, it is believed that many orchardists will profit from the discussion of the California studies and find use for the improvements in irrigation practices that are suggested."

U.S. Soil conservation service. Conservation practices for the range lands of the southern Great Plains, by J.S. McCorkle and Tom Dale. 32pp., illus. Washington, U.S. Govt. print. off., Feb. 1941. 1.6 So3Cr
Conservation practices covered are grazing practices, water conservation, development of range water facilities, gully control, revegetation, ranch management and wildlife and woodland care.

U.S. Soil conservation service. Northeast region. Summary of report of the Pennsylvania soil conservation experiment station. U.S. Soil Conserv. Serv. Northeast. Reg. Reg. Cir. 36. 4pp., mimeogr. Upper Darby, Mar. 6, 1941. 1.9601 R261 no. 36

"This is a summary of the detailed compilation of data from the experimental plots of the Soil conservation experiment station at State College, Pennsylvania. The data in the report include precipitation, plot descriptions and soil and water losses for the years 1936 to 1939 inclusive. The material (in the summary) includes only the main points of interest and major findings."

The complete report is on file in the SCS Regional library, Upper Darby, Pa.

Vanatta, E.S. Training increases survey efficiency. U.S. Soil Conserv. Serv. Upper Miss. Reg. Prog. Exch. Tech. Sup. 5pp., mimeogr. Milwaukee, Apr. 22, 1941. 1.9604 P941

Outlines the training program conducted in Region 5 for all probationary junior soil surveyors.

Geological Survey

Cady, R.C. Effect upon ground-water levels of proposed surface-water storage in Flathead lake, Montana. U.S. Geol. Survey. Water-Supply Paper 849-B. 30pp., maps. Washington, U.S. Govt. print. off., 1941. 407 G29W no. 849-B

Meinzer, O.E., Wenzel, L.K. and others. Water levels and artesian pressure in observation wells in the United States in 1939. U.S. Geol. Survey. Water-Supply Paper 886. 933pp. Washington, U.S. Govt. print. off., 1940. 407 G29W no. 886

This is the fifth of an annual series, the first, second, third and fourth of which were published as Water-Supply Papers 777, 817, 840 and 845.

U.S. Geological survey. Summary of records of surface waters of Washington, 1919-35. U.S. Geol. Survey. Water-Supply Paper 870. 456pp. Washington, U.S. Govt. print. off., 1940. 407 G29W no. 870

- U.S.Geological survey. Surface water supply of the United States,1938.
Part 1.North Atlantic slope basins. U.S.Geol.Survey.Water-Supply
Paper 851. 496pp. Washington,U.S.Govt.print.off.,1940. 407 G29W no.851
- U.S.Geological survey. Surface water supply of the United States,1938.
Part 2.South Atlantic slope and eastern gulf of Mexico basins. U.S.
Geol.Survey.Water-Supply Paper 852. 293pp. Washington, U.S.Govt.
print.off.,1940. 407 G29W no.852
- U.S.Geological survey. Surface water supply of the United States,1939.
Part 2. South Atlantic slope and eastern Gulf of Mexico basins. U.S.
Geol.Survey.Water-Supply Paper 872. 388pp. Washington, U.S.Govt.
print.off.,1941. 407 G29W no.872
- U.S.Geological survey. Surface water supply of the United States,1939.
Part 4.St.Lawrence river basin. U.S.Geol.Survey.Water-Supply Paper
874. 213pp. Washington, U.S.Govt.print.off.,1940. 407 G29W no.874
- U.S.Geological survey. Surface water supply of the United States,1939.
Part 6. Missouri river basin. U.S.Geol.Survey.Water-Supply Paper 875.
506pp. Washington, U.S.Govt.print.off.,1941. 407 G29W no.875
- U.S.Geological survey. Surface water supply of the United States,1939.
Part 7. Lower Mississippi river basin. U.S.Geol.Survey.Water-Supply
Paper 877. 379pp. Washington, U.S.Govt.print.off.,1940. 407 G29W no.877
- U.S.Geological survey. Surface water supply of the United States,1939.
Part 8. Western Gulf of Mexico basins. U.S.Geol.Survey.Water-Supply
Paper 878. 393pp. Washington, U.S.Govt.print.off.,1941. 407 G29W no.878
- U.S.Geological survey. Surface water supply of the United States,1939.
Part 9. Colorado river basin. U.S.Geol.Survey.Water-Supply Paper 879.
309pp. Washington, U.S.Govt.print.off.,1940. 407 G29W no.879
- U.S.Geological survey. Surface water supply of the United States,1939.
Part 11. Pacific slope basins in California. U.S.Geol.Survey.Water-
Supply Paper 881. 446pp. Washington, U.S.Govt.print.off.,
1940. 407 G29W no.881
- U.S.Geological survey. Surface water supply of the United States,1939.
Part 12.Pacific slope basins in Washington and upper Columbia river
basin. U.S.Geol.Survey.Water-Supply Paper 882. 246pp. Washington,
U.S.Govt.print.off.,1940. 407 G29W no.882
- U.S.Geological survey. Surface water supply of the United States,1939.
Part 13.Snake river basin. U.S.Geol.Survey.Water-Supply Paper 883.
315pp. Washington,U.S.Govt.print.off.,1940. 407 G29W no.883
- U.S.Geological survey. Surface water supply of the United States,1939.
Part 14.Pacific slope basins in Oregon and lower Columbia river basin.
U.S.Geol.Survey.Water-Supply Paper 870. 220pp. Washington, U.S.
Govt.print.off.,1940. 407 G29W no.870

White, W.N., Sayre, A.N. and Heuser, J.F. Geology and ground-water resources of the Lufkin area, Texas. Prepared in cooperation with the Texas board of water engineers and the city of Lufkin. U.S. Geol. Survey. Water-Supply Paper 849-A. 58pp., illus. Washington, U.S. Govt. print. off., 1941. 407 G297 no. 849-A

Miscellaneous

Milk, R.G. A method of comparing alternative uses of poor land. U.S. Works Prog. Admin. Rural Res. Ser. Monogr. 125. 36pp., mimeogr. Knoxville, Mar. 31, 1941. 173.2 W89Co no. 125

Points out a method whereby an analysis can be made of alternative uses for a given area.

The discussion is restricted to two parts: One concerns the problem of best land use for land now too eroded or depleted for profitable intensive cultivation, but which can be mowed and could be replanted to crops after treatment. Such land might be used for forest, pasture or hay. The other section concerns land where erosion has caused gullies so numerous and large as to make it impractical to mow the land or cultivate it. Here two uses present themselves (a) reforestation or (b) pasture.

Economic aspects are a feature of the publication, there being many tables giving costs, returns, etc.

Milk, R.G. A method of testing county planning committee recommendations. U.S. Works Prog. Admin. Rural Res. Ser. Monogr. 123. 32pp., mimeogr. Knoxville, Mar. 20, 1941. 173.2 W89Co no. 123

"The Roane County Land-Use Planning Committee requested the Land Grant College - B.A.E. Committee through research agencies to provide information on the effect of carrying out suggested changes and practices upon the farm organizations and farm incomes by areas, sub-areas, and the county as a whole - as means, through which various recommendations may be improved and better adapted to specific areas.

"The purposes of this study are two-fold: to provide the Roane County Committee with as much of the information as possible and to outline a method which can be used to test the probable effects of the recommendations of other county program planning committees."

Included are some probable effects of committee recommendations as to terracing, strip cropping and contour cultivation.

U.S. Engineer office. A study of methods used in measurement analysis of sediment loads in streams. 2v., illus., processed. Iowa City, St. Paul engineer district sub-office, Hydraulic laboratory, University of Iowa, Aug. 1940. 152.26 St9 v.1 and 2

Bibliographies.

Report no. 1. Field practice and equipment used in sampling suspended sediment. Report no. 2. Equipment used for sampling bed-load and bed material.

U.S.Tennessee valley coordinating committee. Results of cooperative tests of Tennessee valley authority plant food materials by the valley states land grant colleges.Part I.Agricultural experiment station results.Prepared under the auspices of the coordinating committee of the valley states land grant college,the United States Department of agriculture and the Tennessee valley authority. 78pp.,mimeogr. [n.p.]Nov.1940. 1.947 R31

BIBLIOGRAPHIES AND LISTS

Benton,Mildred,comp. Orchard erosion control.A list of references. U.S.Soil Conserv.Serv.SCS Libr.List 1. 8pp.,mimeogr. Washington, D.C.,Apr.1941. 1.96 R312Li no.1

* U.S.Bureau of entomology and plant quarantine.Library. Grasshoppers in the United States,selected references,1931-1940. 2pp.,typed. Washington,D.C.,Oct.11,1940.

U.S.Forest service.Library. Publications on forestry 1935-1940.An annotated list including reviews,abstracts,and other information. Part II.Bulletins and pamphlets. 88pp.,mimeogr. Washington,D.C., Mar.1,1941. 1.962 L3P96 pt.2

"Includes bulletins and pamphlets,principally those issued as official publications of institutions and organizations.No mimeograph material has been included."

TRANSLATIONS ON FILE IN THE SOIL CONSERVATION SERVICE LIBRARY

Ginkul,S.G. On the cultivation of the cork oak (O kul'ture prob kovogo duba) Subtropics no.5/6, pp.30-35. May/June 1930.

Translated from the Russian by V.Koulibin.

Issued by the U.S.Soil conservation service.Hillculture division, May 20,1940.

Kanivetz,I.I.and Korneeva,N.P. Importance of biochemical structure formers (O znachenie beokmecheskekh strooktoo brazovateiei) Pedology 32(10):1429-1441,illus. 1937.

Translated from the Russian by Rebecca Minicker.

Issued for official use only by the U.S.Soil conservation service. Hillculture division,May 24,1941.

* Can be borrowed for copying.

DEFENSE AND DEMOCRACY

America, the food depot of democracy. South. Planter 102(7):4, 31, illus.
July 1941. 6 So89

American council on public affairs. Design for defense. A symposium
of the Graduate school, U.S. Department of agriculture. 40pp.
Washington, D.C. [1941?] 280.12 Am35D
Contents: Public opinion, by Max Lerner, pp. 1-12; Technology, by Walter
Rautenstrauch, pp. 13-23; Diplomacy, by A.A. Berle, jr., pp. 24-28; Agriculture,
by J.D. Black, pp. 29-40.

Bidwell, P.W. If war comes. Mobilizing machines and men. Pub. Aff. Com.
Inc. Pub. Aff. Pam. 48. Rev. ed., 32pp., illus. New York,
1941. 280.9 P964 no. 48 rev.

Brand, C.J. Agriculture after the war. Amer. Fert. 94(13):9-11, 20, 22, 24.
June 21, 1941. 57.8 Am3

"The urge for National self-sufficiency that largely originated in
the World War is being greatly intensified in this war. Unfortunate
as it may be, the future trend of international trade in agricultural
products will no doubt continue downward, particularly as to usual
farm products of the temperate regions as distinguished from special-
ties like rubber, coffee, tea, sugar, jute, sisal, etc. The 30 million acres
or thereabout which not many years ago were devoted to growing crops
for export must, as quickly as possible, be turned to production of
crops for domestic uses. Restricted foreign outlets will confront us
for many years, and the greatest caution must be exercised lest we
again indulge in an unwise and destructive expansion of our agricul-
tural plant such as that experienced during the World War."

Cherno, L.M. Your business and the unlimited emergency. The shape of
things - now! Nation's Bus. 29(7):[17]-64, illus. July 1941. 286.8 N21:

Discusses: (1) The lessons of 1918; (2) From war to war; (3) Essence of
'unlimited emergency'; (4) The materials vital in defense; (5) Priorities -
the key control; (6) Price control - the lid on economy; (7) Working our
machinery for defense; (8) Labor - motive factor in production; (9) The
position of power and fuel; (10) Capital and credit - the oil in the
economic machinery; (11) Conserving the nation's resources; (12) The changed
motive forces in distribution and advertising; (13) Profits, savings and
taxation; (14) Learning from England's experience; (15) Germany - an
economy built for war; (16) Understanding our defense.

Englund, Eric. The war and our changing agriculture. Amer. Soc. Agron.
Jour. 33(5):379-390, illus. May 1941. 4 Am34P

"It would be useless to hope that soil erosion and depletion of soil
fertility will be reversed or that the broad problem of land use will
be solved by war impacts. The pressure is likely to be in the opposite
direction, especially if there should eventually be a market premium
upon soil depleting crops and upon that type of cultivation which

hastens erosion. This, however, seems less likely than was the case in the last war because of the present unfavorable position of our great export crops. Unless the war and the defense effort should absorb public interest and resources to such an extent in the next few years as to preclude for a time full continuation of the land use and conservation programs already under way, it is probable that these programs will go forward as the basic reasons for them will remain."

Johnson, S.E. Farm adjustments to meet war impacts. Amer. Soc. Agron. Jour. 33(5):391-402. May 1941. 4 Am34P

Sketches briefly the adjustment problems by regions, dwelling mostly on cotton, tobacco, and wheat.

Palmer, Lane. National defense at the U.S.A.C. Utah Farmer 60(18): 11, 14. May 10, 1941. 6 D45

"In outlining the work that the college (Utah State Agricultural College) should do in the national defense drive, President Peterson stresses the importance and significance of agriculture and related fields. 'We must recognize,' he says, 'that our very civilization is based on the soil and the practice of tilling it. If our civilization is based on it then such a far-reaching program as that of national defense must also be built on that same foundation. Every farm, every shop, every business establishment must rededicate its energies to the public service.'

"Using this as their standard, each department, school and division is adapting to place special emphasis on national defense. Leaders of the seven schools - agriculture, engineering, and mechanic arts, forestry, home economics, education, commerce, and arts and sciences are formulating courses of procedure to include discussions of the relationship between each respective subject and the national defense program."

U.S. Bureau of plant industry. The scientist and social policy in the democratic state. 26pp., mimeogr. [Washington, D.C.] Mar. 1941. 1965 S6K29

Walcott, F.C. Defense waste of natural resources can be avoided says conservationist. N. Dak. Outdoors 3(8):12-14, illus. Feb. 1941. 412.9 N815

"Forefathers built this country as much upon its basic natural resources as upon their firm determination to create a new nation where all might live in equality, justice and freedom."

Warburton, C.W. The farm in national defense. Agriculture is ready to do its part to meet any emergency that may arise. Anderson Bus. 5(12): 7-8, illus. Dec. 1940.

Wickard, C.R. Farmers and defense. 40pp. Washington, D.C., American council on public affairs [1941] 281.12 W63

PERSONNEL AND TRAINING

- Appley, L.A. The human element in personnel management. Soc. Personnel Admin. Pam. 4. 34pp. Washington, D.C., Jan. 1941. 249.39 Sol no. 4
- Carlson, Dick. Employee improving rating method. Personnel Jour. 19(10): 364-367. Apr. 1941. 280.8 J824
- Moore, Herbert. Employee attitude surveys. Personnel Jour. 19(10): 360-363. Apr. 1941. 280.8 J824
"A survey showed that 89% of workers liked their jobs. 11% did not. The centers of potential disorder are among this latter group who are constantly dissatisfied because of their lack of interest in the job and a feeling of scorn for everything connected with it."
- Pennebaker, K.C. Techniques vs. administration in personnel. Personnel Admin. 3(7): 8-9. Mar. 1941. 249.38 P43
- Ross, T.H. The engineer's responsibility in management. Mechan. Engin. 63(7): 524-526, 542. July 1941. 291.9 Am3J
"Presented at a meeting of the Los Angeles Section, Los Angeles, Calif., Jan. 16, 1941, of The American Society of Mechanical Engineers."
- Sims, L.B. Professional personnel in the federal government. Pub. Admin. Rev. 1(3): 271-280, illus. Spring 1941. 280.8 P964
- Stonesifer, J.W. Evaluating success in terms of background. Personnel Admin. 3(7): 10-15, illus. Mar. 1941. 249.38 P43
- U.S. Dept. of agriculture. Office of personnel. Division of training. The development of administrators. Interim report of training council committee on training in administrative management. 14pp., mimeogr. [Washington, D.C., Apr. 18, 1941. 1.917 T2D49
- U.S. Dept. of agriculture. Office of personnel. Division of training. Writing effective USDA reports. 8pp., processed. Washington, D.C. [1941] 1.917 T2W93
"Reference publications on report writing," p. 8.
- Wilking, S.V. Reading ability and executive efficiency. Personnel Jour. 20(1): 34-37. May 1941. 280.8 J824
"In a recent class designed to improve reading ability in a large Eastern university a sizeable number of high ranking executives enrolled because of a felt need to improve their ability to deal with all their paper work."
- Wilson, T.F. The FCA experiment in decentralization. Personnel Admin. 3(7): 1-4. Mar. 1941. 249.38 P43

